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286 Computers

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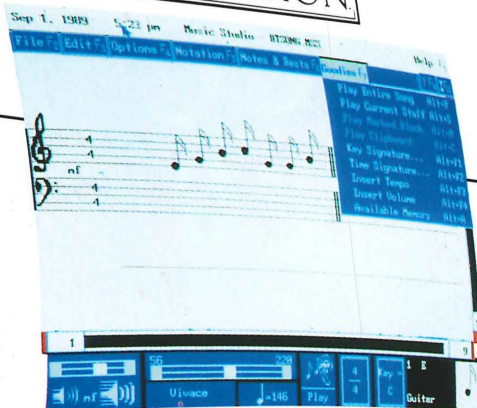
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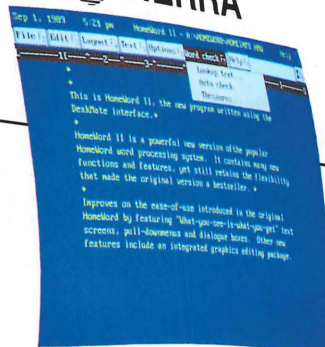
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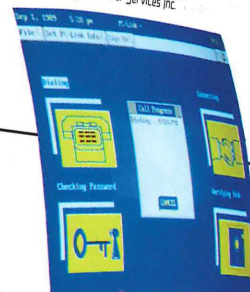
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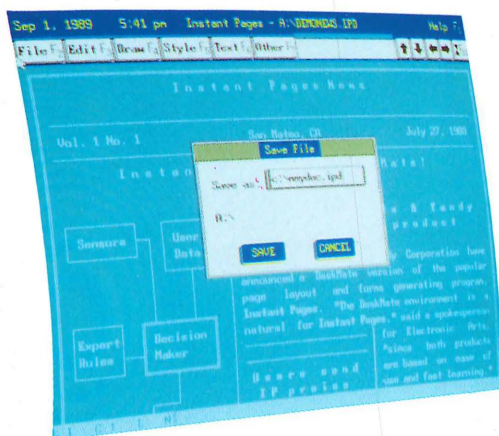
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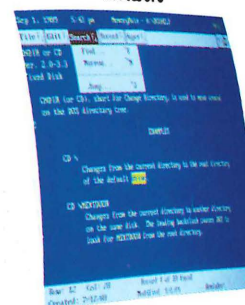
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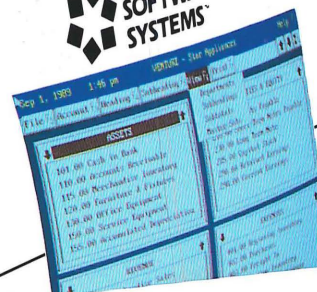
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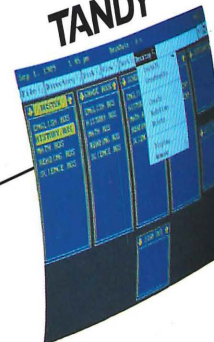
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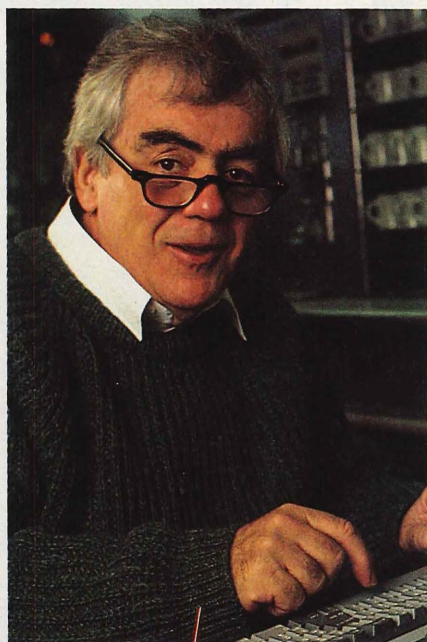
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COVER PHOTOGRAPH BY PAUL D'INNOCENZO

FEATURES

COVER STORY

Buyer's Guide to 286 Computers

Page 39

What's the best computer for upgrading your home office or equipping a new one? Discover the features that make a 286, or AT-compatible computer, a wise and popular choice. Our buyer's guide includes answers to commonly asked questions, a shopping chart with specifications on 23 popular models, and reviews of 5 new computers.

LIFESTYLE

Celebrity Writers Get Around the Block

Page 45

Top-flight authors Shana Alexander, Noel Behn, Jimmy Breslin, Pete Hamill, and Gabriel Garcia Marquez gave up their typewriters for computers—but not without a fight!

BUSINESS MANAGEMENT

Use the Mail to Build Your Business

Page 49

Apply the tried-and-true techniques of direct mail to bring in new customers and clients, promote your business, and keep existing customers coming back. Includes: *Mailing-list Mechanics*, *10 Ways to Grow a Mailing List*, *Five Tips for Mailing-List Management*, *Mail-Merge Basics*, and a selection of software.

PROFILE

When Theater Meets Big Business

Page 56

Joe and Margaret McGovern pooled their acting and business talents and came up with a unique \$200,000-per-year business.

TIPSHEET

A Legal Checklist for Startup Businesses

Page 58

Protect your dream by satisfying the letter of the law *before* you begin a new business. Here's a 10-point checklist covering all the important steps.

PRODUCTS

Hardware Reviews

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Miniguide to Electronic Typewriters: Canon S-68S, Olympia Compact 3, Panasonic KX-R350, Smith Corona XD-7500, and Xerox MemoWriter. *Computer*: Compaq Deskpro 386s; *Printer*: Hewlett-Packard PaintJet; *Scanner*: Saba Page Reader.

Office Essentials

Page 70

The latest in useful and innovative office accessories, supplies, and furniture. *This month*: An electronic secretary; secure disk-storage boxes; a computer-cleaning kit; a letter-folding machine for mailings; and preformatted floppies.

Software Reviews

Page 72

Back to Basics: *Professional*; *BankMate* and *MoneyMate*; *PC Yellow Pages*; and *WordPerfect Executive*.

FAMILY COMPUTING

Putting Parents into the Loop with Kids and Computers

Page 80

Reading Magic, a new line of software from Tom Snyder Productions, fosters interaction between preschool children and their parents. Company founder Tom Snyder discusses education, kids, computers, and how parents fit in, with Associate Editor Karen Kane.

Software for Learning and Leisure

Page 84

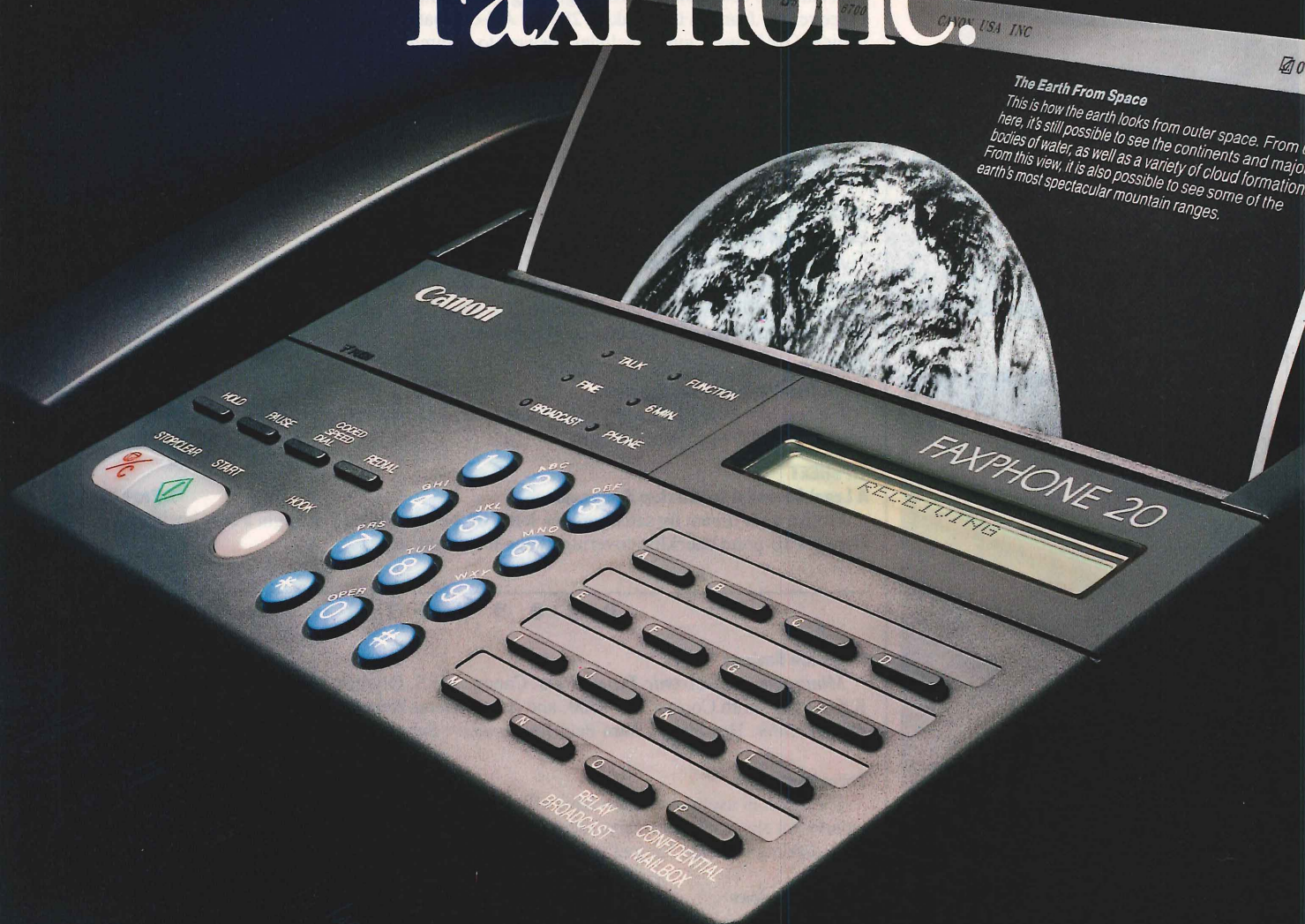
Education/Family Productivity: Long reviews for *Ticket to Hollywood* and *NumberMaze*; capsule reviews for *Crossword Puzzle Generator*, *Story Sketcher*, and *The Perfect Career*.

Entertainment: Long reviews for *Zork Zero: The Revenge of Megaboz* and *F-19 Stealth Fighter*; capsule reviews for *Dolphin Sailing Simulator: Chesapeake Challenge*, *Jack Nicklaus' Greatest 18 Holes of Major Championship Golf*, *Life & Death*, *Visions of Aftermath: The Boomtown*, and *Zany Golf*.

Entertainment News and Hints

Page 88

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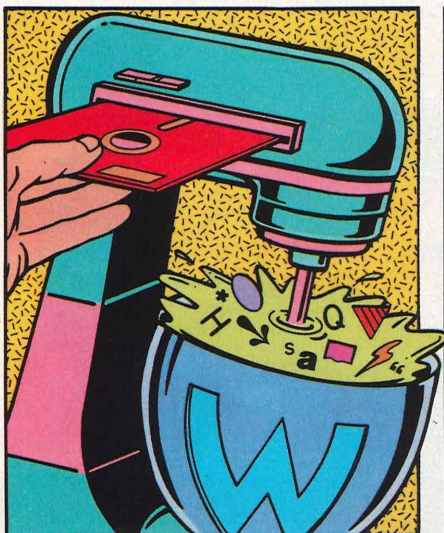
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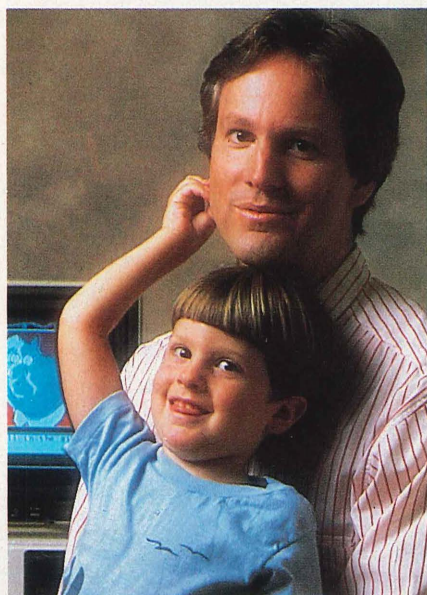
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COLUMNS

Shoptalk

Page 16

Advice on Money-Brokerage Houses and Credit Ratings. Small-business and home-office consultant Joanne Pratt answers questions from readers on fixing faulty credit and managing a network for lenders and borrowers.

Clinic

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An Ounce of Prevention. . . . HOME-OFFICE COMPUTING's technical staff digs up answers to readers' computing questions. *This month:* Avoiding hazards in your home and the DOS compatibility of Tandy's *DeskMate*.

Machine Specifics

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Portable Printer for the Mac; OS/2 v 1.1; Upgrading DeskMate. Computer and software news, opinions, quotes, and rumors, reported by HOME-OFFICE COMPUTING columnists, covering the constantly expanding Apple and Macintosh, Tandy, and MS-DOS and PS/2 universes.

Telecomputing

Page 34

Sending Information from Here to There. In his first article for HOME-OFFICE COMPUTING, technology writer and columnist Alfred Glossbrenner reveals tips on formatting and ensuring the transmission of error-free text.

Working Smarter

Page 36

Accepting Credit Cards from Your Customers. Columnists Paul and Sarah Edwards offer ideas, inspiration, and strategies for succeeding at the work-from-home lifestyle. This month's column includes tips on getting merchant credit status; increasing pleasure and profits; and cutting laser-printing time.

Workstyles

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Organization Man, Late 1980's Style. Good ideas no longer need evaporate! After many attempts at organizing information, our telecommuting senior editor, Nick Sullivan, uses *Lotus Agenda* to bring new life to overlooked information.

DEPARTMENTS

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Letters

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Up Front

Page 12

News, advice, tips, and a shot of humor on computing, using home-office technology, and running a home business. *This month:* The advantages of bartering; miniature monitors; busy-office sounds; tips on hiring a computer consultant; and a new book on free software.

Word Processing

Page 24

MS-DOS Word Processors for Desktop Publishing. Not ready to buy an expensive, complicated desktop-publishing program? You can save money and time, and do basic document formatting by putting the inherent graphics capabilities of Microsoft *Word*, *WordPerfect*, or *WordStar Plus 2000* to work.

Desktop Publishing

Page 28

Graphics for the Non-Artist. Even if you can't draw a straight line, you can give documents professional graphic appeal with disk-based artwork, or clip-art.

Databases

Page 30

Lotus Agenda Reviewed. Lotus's unique free-form database helps organize textual and calendar information, client contacts, and other data—creating the "big picture" from random facts.

Finance

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Accounting Help! Learn the basics of accounting with video and disk-based tutorials. With ratings of both stand-alone tutorials and those included in top accounting programs from Individual Software, Dac Software, Peachtree, and Professional Software.

Best-Selling Software

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Classifieds

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Bring work home from the office...



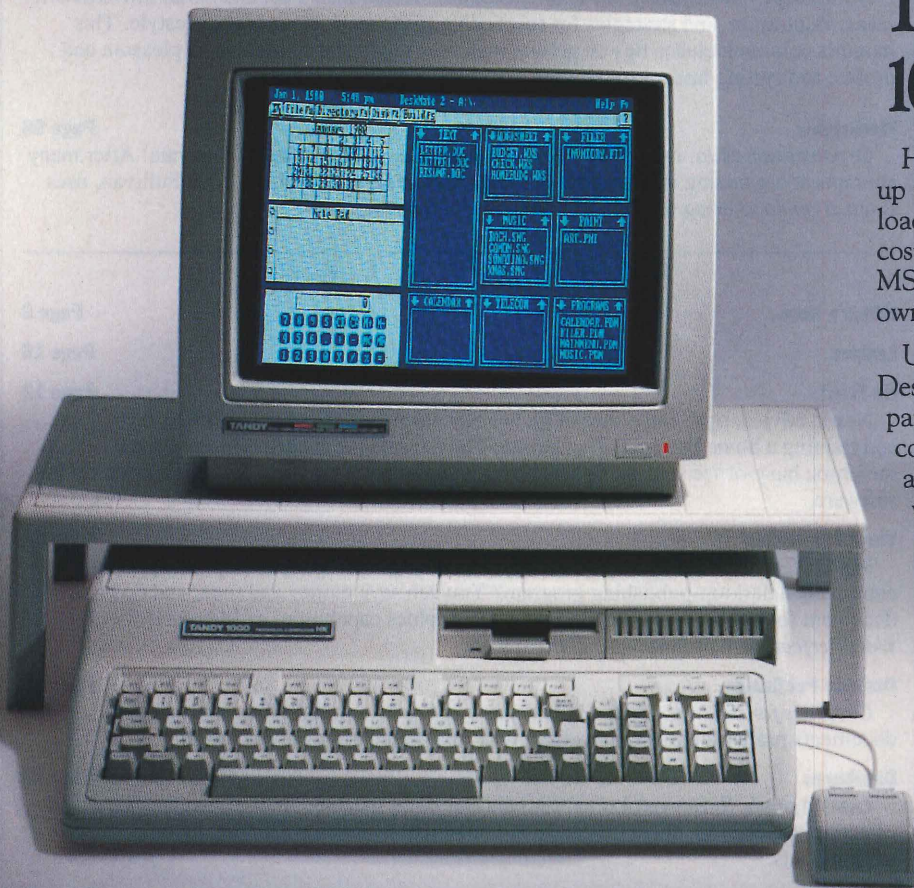
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8 HOME-OFFICE COMPUTING

EDITOR'S NOTE

The Perfect Marriage— The Message and the Mechanics

Every month in HOME-OFFICE COMPUTING we emphasize how important it is for the home-based entrepreneur to project a professional image. But with this issue I want to remind readers not to get so caught up in the polish and convenience technology makes possible that they lose sight of the substance.

I continue to be surprised by the professional-looking documents I so often receive that are poorly written, unclear, and riddled with clichés, to say nothing of grammatical errors and misspelled words. Today, it is relatively easy to improve the efficiency of marketing via mail (see *Use the Mail to Build Your Business*, page 49). Thanks to well-managed mailing lists, a growing number of poorly prepared sales tools and other mailings are reaching their targeted audiences. I'm sure a lot of potential customers are appalled, as I am, by the lack of professionalism displayed.

Creating an attractive sales piece and mailing it to the right list will work to some extent, but in the long run, to sell effectively through the mail, you've got to have it all—the message, the professionalism, and the mailing list.

Writing a good message is easier than it may seem. Here are some of the basics we try to keep in mind when writing for you:

- Start with an outline. Jot down what you want to get across.
- Be clear, not clever. A reader should understand your message on the first try.
- Keep it short. Not everyone has the time or interest to read a lot of text.
- Keep it simple. Avoid big words and long sentences.
- Resist falling in love with your own words. If you have trouble getting an idea across, cut your favorite phrase or section. Then try again. Often the phrase that sounds so wonderful to your own ears obscures the intended message.

These few reminders don't even begin to touch on the fundamentals of good writing. Pay attention to what makes you respond to other people's prose. Consider taking a writing course at a local college or university, or



watch for specialized workshops for professionals. Invest in at least one writer's manual. For example, *The Elements of Style*, Third Edition (William Strunk, Jr., and E.B. White, Macmillan Publishing Co., 1979, \$3.95), is well worth its modest cost. Keep a good dictionary and a thesaurus or dictionary of synonyms nearby, and, above all, use them to help give your writing both accuracy and style.

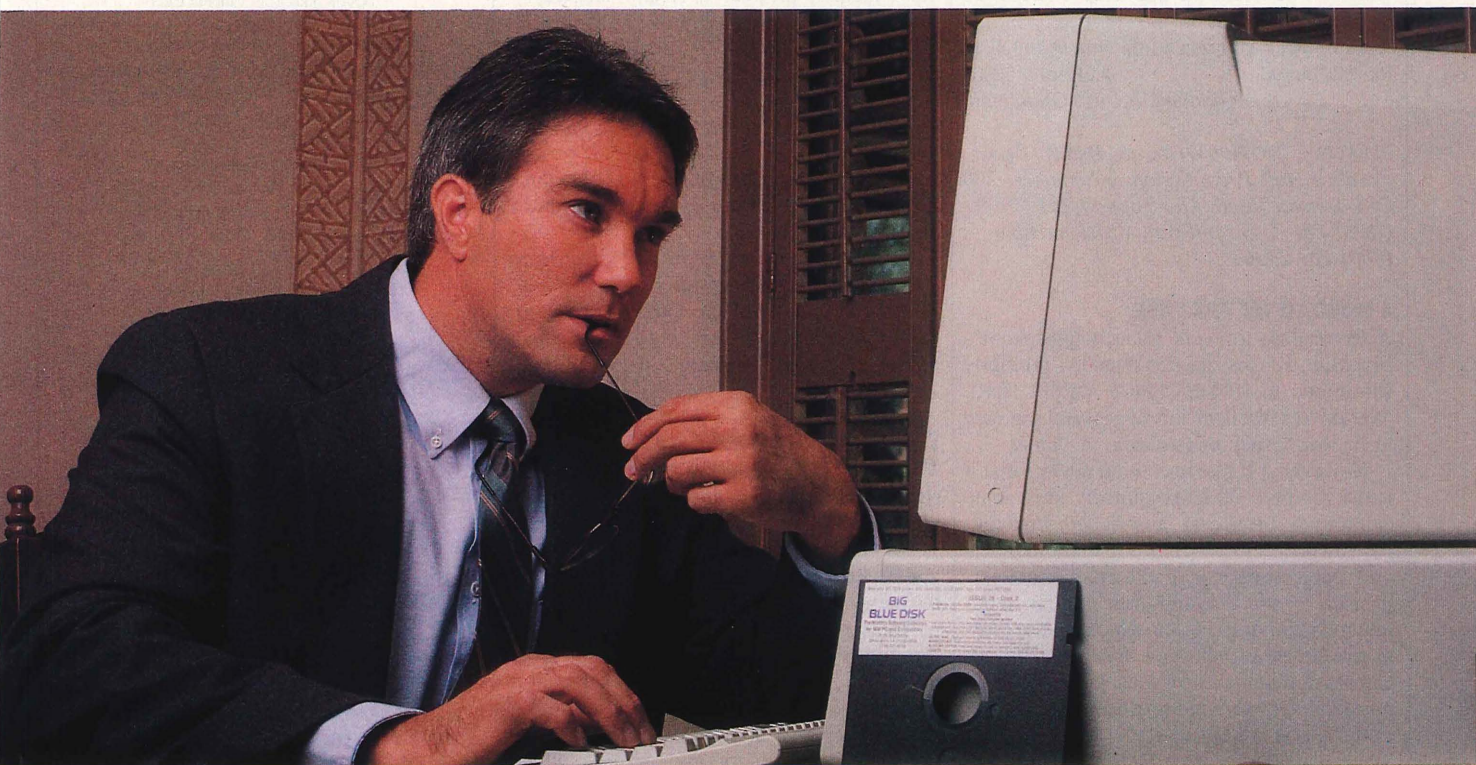
Pride in oneself is the most important ingredient of good work. That pride can even overcome a foe as powerful as laziness. Every time you hesitate to check a word's spelling or usage, remember that an error will reflect badly on your reputation as a professional.

Keep in mind that you have to edit your writing long before you show it to the rest of the world. We're lucky that today computers make it so easy to work at perfecting our prose.

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A WORD TO THE FAX WISE

After reading a recent issue bought from a Franklin, Tennessee, newsstand, I promptly subscribed to HOME-OFFICE COMPUTING. You do an excellent job of researching new technology, such as facsimile machines.

However, I'd like to caution readers that it is risky to give out a fax number, since some enterprises broadcast unsolicited material. Fax owners should give out their numbers only upon request, and with conditional permission for use. We subscribe to a fax sending-and-receiving service, which we use three to five times a week, and their fees add up. Clients reimburse us for most business transmissions, but we wind up absorbing the cost of those that are unsolicited.

EARL T. HALE, SR.
Birmingham, Alabama

EDITOR'S NOTE: Readers with facsimile machines should also be aware that "fax junk mail" can rapidly consume costly fax paper.

CRITICAL POINTS

I look forward to each issue, even though my computer is no longer covered by HOME-OFFICE COMPUTING. Your articles are concise and provide the support I need as I conduct my home-based psychology consulting practice.

However, your January 1989 article on government bulletin boards (page 34) was a tease. It would have helped if numbers of the bulletin-board services were included. The same goes for the article on choosing a copier—pictures but no addresses or telephone numbers. I hope this is not an example of what to expect in future issues.

MICHAEL D. WILLIAMS
Menomonie, Wisconsin

Your review of the Hewlett-Packard DeskJet printer did not mention some critical points:

1) DeskJet ink is water soluble. If you doubt that, just drop some water or coffee on the letter I sent you. 2) Discounters often sell "gray-market" machines that are not warranted or supported by Hewlett-Packard. I learned this when I unpacked my mail-order printer and found no warranty card! 3) With-

out several expensive cartridges, you don't have much type versatility. The printer's Epson Emulation cartridge helps, but will not, for example, produce a clean "sideways" spreadsheet. Even programs with DeskJet drivers may require an additional cartridge to produce anything bigger than 12-point type.

L. M. VICK
Los Angeles, California

Your new focus on the business applications of computers in the home is excellent, but I do have a criticism.

Success stories of \$150,000 businesses started in the home are edifying and fine to read, but what about the hundreds of thousands of computer users who aim at more attainable levels of income? RUSSELL LUX
Evansville, Indiana

THE LOG CABIN OFFICE

Your magazine brings useful information right into my home—and that's great when you live in the back woods of Idaho, as I do.

I bought a computer a few months ago, and it has not only enhanced my writing business, but has also given rise to a sideline business producing flyers, posters, and correspondence for other businesses in the area. We often barter services—for example, a furniture refinisher does my antiques and a clothing designer literally keeps the shirts on my back in return for my services, which make them look professional.

Your magazine speaks to me, anticipates my questions about business and technology, and gives me access to the latest computer products right from my rural log home (our nearest computer store is an hour's drive away). HOME-OFFICE COMPUTING is now one of my tools!

BARBARA COYNER
Princeton, Idaho

LET US KNOW ABOUT YOUR BUSINESS

We're eager to hear about readers' work-from-home experiences and needs. If you, a friend, or an associate operates a home-based business, telecommutes, or works at home for a corporation, please let us know about it. Give us a few details, such as the startup story; financing methods; marketing strategies; family members involved; and the computers, software, and related products that are used. Include the business name, address, telephone number, and a photograph if possible.

HOME-OFFICE COMPUTING looks forward to letters from all readers. Please direct correspondence to Letters to the Editor, HOME-OFFICE COMPUTING, 730 Broadway, New York, NY 10003. Include name, address, and telephone number. Letters become the property of HOME-OFFICE COMPUTING, and may be edited for length and clarity. ■

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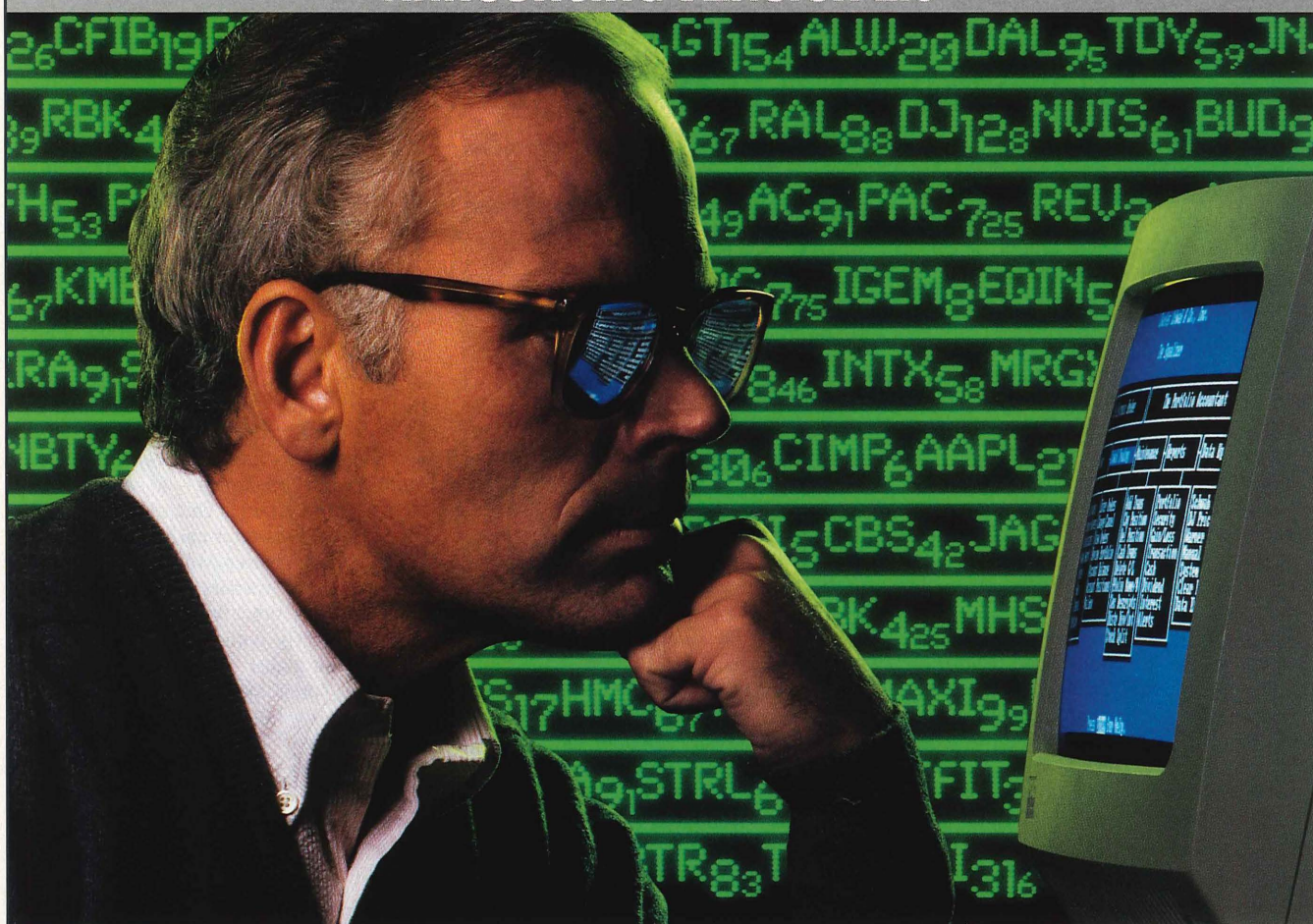
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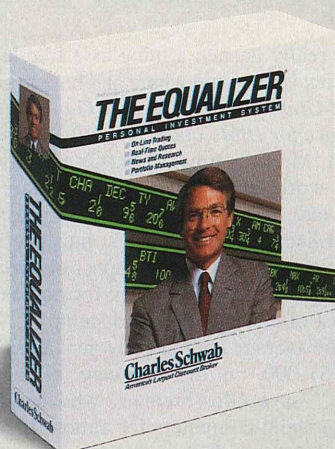
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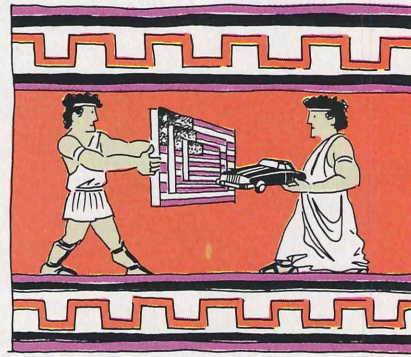
EDITED BY LISA WU AND BRIANNA POLITZER

The Ancient Art of Bartering Revived

The purchase of Manhattan is one of the best-known real-estate deals in American history—and among the most famous barterers in the world. In 1626, Peter Minuit, a Dutch government official, cut a deal with the Native American residents to trade \$24 worth of beads, buttons, and other trinkets for the island of Manhattan.

Today, a new form of bartering—the round-robin exchange—has revived interest in cash-free transactions. Members of these exchanges trade goods and services, although not necessarily one-on-one. There are approximately 400 such exchanges in the United States. Together, they operate much like a stock exchange, complete with brokers matching goods and services from across the country.

Barter Advantage, Inc. in New York City, for instance, has 1,000 members who trade \$2 million worth of goods and services annually, according to company president Lois Dale. Members include art dealers, restaurateurs, printers, lawyers, doctors, accountants, resort hotels, airlines, caterers, and retailers. Membership costs \$400 plus \$200 worth of goods or services for the initial fee, and \$200 plus \$100 worth of goods or ser-



vices annually. Barter Advantage charges a 10 percent commission fee on purchases. Dale's philosophy is: If the shoe fits, don't buy it; barter for it. Bartering is the cashless art of trading what you have for what you want while at the same time increasing your sales and profits.

For the small-business owner, a barter network can be a boon to business, allowing greater control over cash flow and a network of potential clients—without a crippling investment of time or money. "Members grow their businesses at faster rates than normal," according to Dale, who started out at home herself. Goods and services for exchange are

also written up in a newsletter and broadcast on a hotline.

Barter Advantage brought Dan Smigrod, a home-based marketing consultant, three new clients when he joined last year. Smigrod receives barter credit units by working for other barter associates and uses the units to entertain clients at Manhattan restaurants owned by barter members. He spends coupons, not cash. "I reduce my monthly cash outlay," says Smigrod. "And I'm able to use connections made through the barter to build my business image—to send flowers to a client, to entertain at chic restaurants. Also, my barter clients refer cash clients."

Many of the barter-exchange members are small-business owners who prefer doing business with other entrepreneurs. "I like dealing directly with the person at the top, the decision maker," says Smigrod.

Dale is spreading the word and her barter know-how by holding seminars around the country called "How to Start and Operate a Profitable Barter Exchange." Call (212) 534-7500 for more information. Or to find out about a barter exchange in your area, call the International Reciprocal Trade Association at (703) 931-0105. —LISA WU

ILLUSTRATION BY MONA MARK

Miniature Monitor of the Future

The age of miniaturization has arrived, bringing scads of credit-card-size calculators, hordes of handheld computers, and cassette players the size of cigarette packs. This year's minuscule wonder? Private Eye, a computer monitor about the size of a roll of quarters.

Private Eye is an ultraminiature video display viewed with one eye. The brainchild of inventor Allen Becker, president of Reflection Technology, Inc., of Cambridge, Massachusetts, the device requires only half a watt of power and can be battery operated. When you look inside, a full-size 12-inch computer display, capable of 720-by-280 pixel resolution appears to be floating two feet away from your eye. It can be mounted on eyeglass frames, headbands, or headsets.

Small size, light weight, and low power



requirements could make Private Eye the new standard of portability. For the next step, Reflection Technology is working with 100 companies, from computer developers and electronic toy producers to medical instrumentation companies to codevelop new lines of products that will use Private Eye. The device will give full-page display capability to pocket-size calculators, computers, paperless facsimile machines, or any handheld instrument. —LISA WU

How to Get Free Software

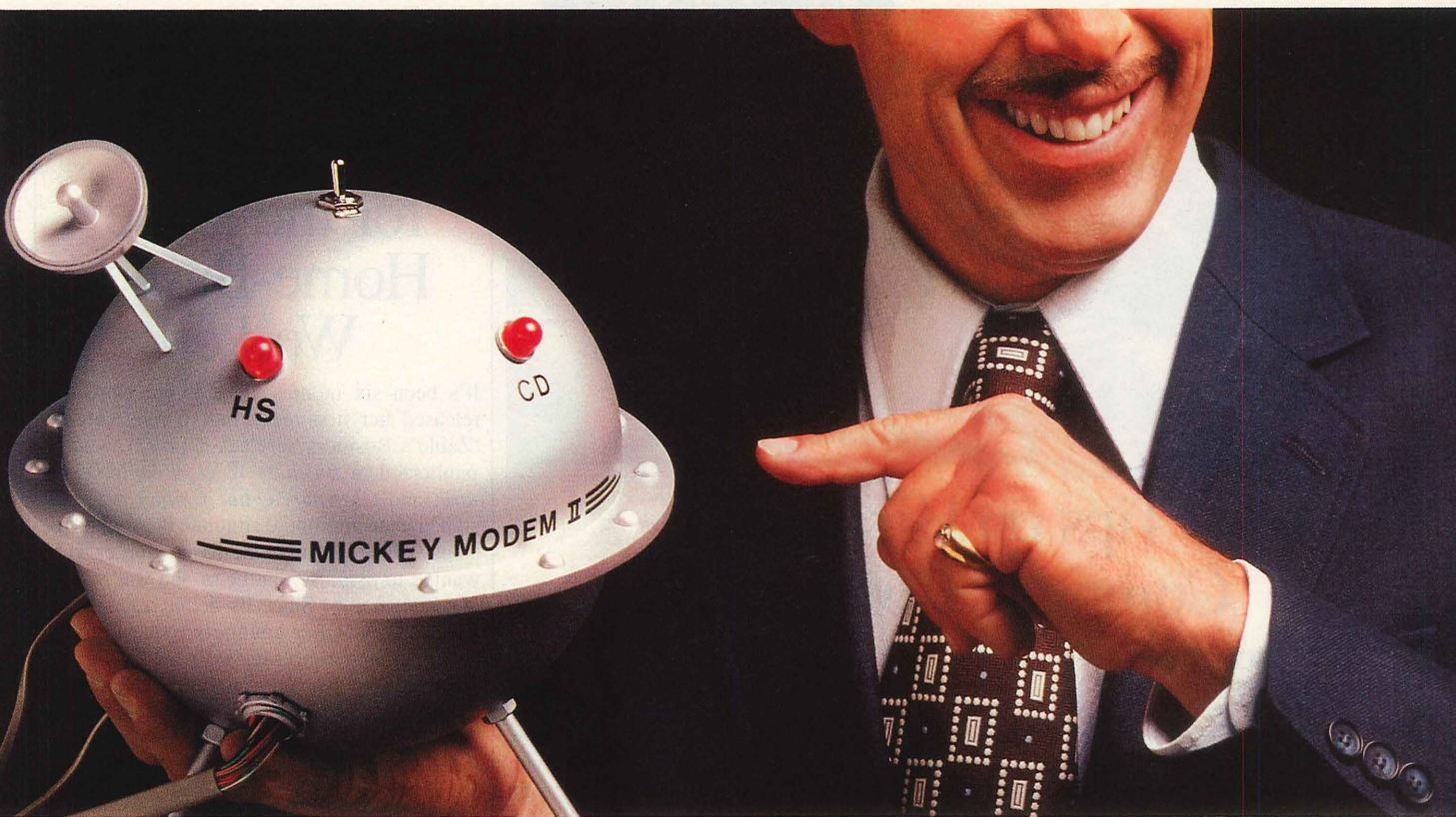
There really is such a thing as a free lunch. The trick is knowing where and how to get it. *Alfred Glossbrenner's Master Guide to Free Software for IBMs and Compatible Computers* (St. Martin's Press, \$18.95) is your door to the world of public-domain software and shareware. You can add word processing, spreadsheet, games, graphics, music, education, database, communications, or accounting programs to your library for no cost, or the cost of a floppy disk and stamp.

"The average computer owner can save at least \$1,000 on the software he or she needs," says Glossbrenner, who has been writing about computers for almost 10 years and will be contributing regularly to HOME-OFFICE COMPUTING. "You name it, and chances are there's a full-featured, full-powered public-domain or shareware program that'll do the job."

In his book, Glossbrenner names his picks: the best programs in every category, the best mail-order sources, the best computer users' groups, and the best way to locate programs on electronic bulletin boards. —LISA WU

What do Apple Computer, Baskin Robbins Ice Cream, Hallmark Cards, Nike Shoes, and Walt Disney Productions have in common?

They all began as home-based businesses.



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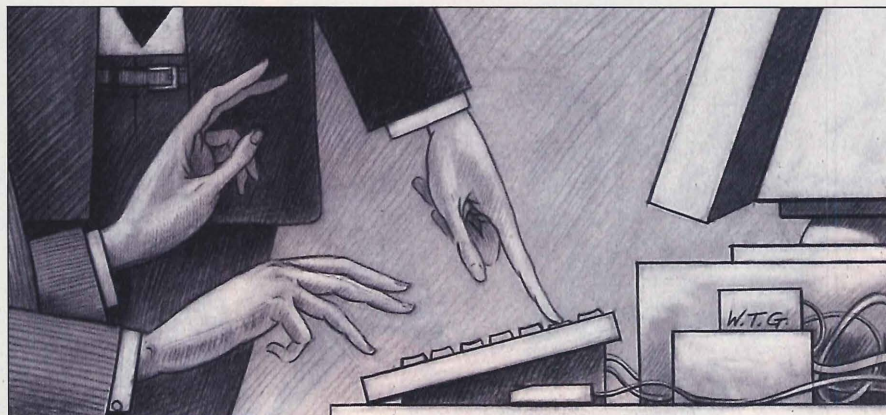
Will you get a modem like the Smartmodem 1200 that is tested and inspected over 20 times and offers the most comprehensive performance warranty in the business?

Will you get a modem like the Smartmodem 2400 that has Hayes AutoSync for built-in synchronous capability without the extra expense of an adapter card?

Will you get a modem that has software, like the Hayes Smartcom family of software, that's specifically designed to deliver the full functionality of a Hayes modem? No way.

So if you want to save yourself a little something, don't buy a modem whose best feature is its price tag. Buy a Hayes. And save yourself a lot of aggravation.





Tips on Hiring a Computer Consultant

Murphy's Law prevails. Your new spreadsheet package arrives in the mail, but it can't read files from your old one. You've been trying to download your electronic mail from a bulletin board, but the text arrives garbled. You want to install a new VGA card in your computer, but you can't find the slot and the instructions are written in a language that resembles Ancient Venusian. What do you do when you just can't figure it out and you're out of patience?

You decide to call a computer consultant for help. Before you do, however, consider these tips from Keith Stern, president of CompuCare, whose clients include NBC, Warner Brothers, and Nippon Airlines:

- The best way to look for a computer consultant is to get a reference from a computer users' group. The worst place to look is in the Yellow Pages.
- Because the service is billed on an hourly basis (usually between \$60 and \$120 per hour), the consultant should be willing to give away one hour of time, as an introductory interview.
- Interview the candidate as if you are hiring a permanent employee. The candidate should be familiar with your business specialty and,

above all, be a good communicator.

- Avoid consultants who work only part-time or are moonlighters. "Part-time consultants often experiment with systems. They lack the experience of those who work with people and computers full-time. A sure sign of a lemon is that he or she thinks the job is done before you do."

- Find someone who respects your present setup, no matter how old or how clunky: The solution probably lies within your parameters. Most of all, the person you employ should be willing to work with existing systems without questioning or deriding choices you made long ago.

- Beware of a consultant who has only one method or one program to show you. He or she may be receiving a sales commission from a software company.

- Instead of teaching clients DOS commands, Stern usually recommends an operating shell program (\$49 to \$79) that builds a bridge for the uninitiated. Shell programs incorporate menus that pop up and ask vital questions such as "Do you want to copy a disk?" Think twice before hiring a consultant who wants to teach you the ins and outs of DOS.

—CLAIRE-FRANCE PEREZ

Computer Chatter for the Lone Home-Based Worker

It's been six months since Laura Newman released her first recording, *Office Chatter* (Zable's Business Services, \$14.95), widely publicized in *Business Week*, *People*, *Venture*, and *Glamour*. *Office Chatter* was designed in an attempt to simulate the sounds of a busy office for the home-based worker who wanted to disguise that he or she was working from home. Since its debut, sales have soared. Now, after countless requests for a tape of computer noises, Newman has finally responded to her fans with the release of *Computer Chatter* (Zable's Business Services, \$14.95), a 60-minute recording featuring the clicking of printers and computer keyboards. In the background are the sounds of employees shuffling papers and closing drawers, telephones ringing, and a voice answering, "Hello, may I help you?"

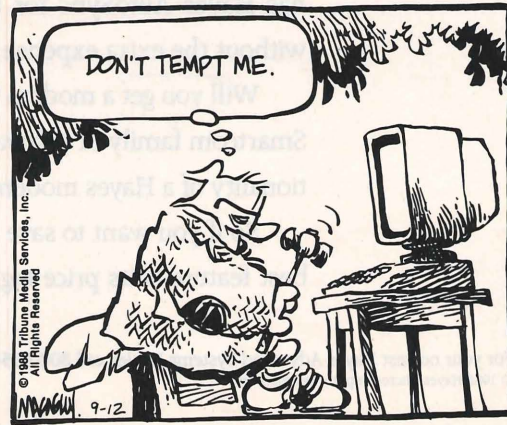
"Many requests for *Computer Chatter* came from lawyers, realtors, and stockbrokers who've been in business for years," Newman says. "They work part of the week in the company office and the other part in their home office. These professionals use computers and printers instead of typewriters."

Newman, the mother of four, returned home to work more than a year ago when she founded Zable's Business Services, an information retrieval service for realtors and lawyers, in Kingston, New York.

With all the attention Newman's receiving, she's had to learn "three years of business smarts in three months. From my experience with *Office Chatter*, I've learned marketing techniques that have helped my other business grow, too."

—LISA WU

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Advice on Money Brokerage Houses and Credit Ratings

BY JOANNE PRATT



Referrals are your best source of new business, as I frequently point out. It's important to show your appreciation to clients and friends who have helped you. The professional response is

to write a thank-you letter on your business stationery. A thank-you note is also a thoughtful gesture to clients who bring you repeat business.

Q. I want to start my own money brokerage service, bringing borrowers and lenders together. Can you recommend a software package?

MICHAEL A. VASILE
Briarcliff Manor, New York

A. Your best bet for systematically organizing your financing sources and client lists is to set up a database. To provide ample space for your business to grow, start with a program that can handle large numbers of records. I find the new *dBase IV* (\$795; Ashton-Tate, 20101 Hamilton Ave., Torrance, CA 90502-1319, [213] 329-9989) much easier to use than its predecessors, and it certainly has all the power you will need. *R:BASE* for DOS (\$725; Microrim, 3925 159th Ave. NE, Redmond, WA 98073-9722, [206] 885-2000) is another good choice. With either program, when companies or individuals come to you for information, you will be able to sort quickly through a vast amount of information, select lending firms that match your clients' criteria, and print reports for them.

You might be interested in how Lane Kramer started a similar business. A former banker, he collected detailed information on 300 financing sources such as venture capitalists, commercial leasing, commercial banks, investment banks, and government lending agencies. He published the information in *The Money Source Book* (\$24.50 plus tax where applicable and \$3.50 shipping, from Financial Services Publications, Inc., 5327 N. Central Expressway, Suite 310, Dallas, TX 75205), which gave him the credibility he needed to speak to business groups, an important source of clients.

Although the scope of the book is limited

to Texas and the Southwest, I recommend investing in a copy to any entrepreneurs interested in starting a similar business or who want to understand the types of financial resources that may also be available in their regions.

Q. I think there's an error in my credit rating. How can I correct it?

GERALD FORD
North Charleston, South Carolina

A. Start by writing the five national consumer credit rating firms and request a copy of your credit reports. From these five sources, you should be able to get a complete picture of

**You're less likely
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fairly regularly, rather
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your credit history: Computer Science Corporation Credit Services, 7909 Parkwood Circle, Suite 200, Houston, TX 77036, (713) 878-4840; Chilton Credit Reporting National Consumer Relations Center, P.O. Box 152058, Irving, TX 75015, (214) 580-8515; Credit Bureau, Inc., 1600 Peachtree Street NW, Atlanta, GA 30309, (404) 982-8540; Trans Union Credit Information Co., 111 W. Jackson Boulevard, Chicago, IL 60604, (312) 431-0144; and TRW Information Services Division, 505 City Parkway W, Orange, CA 92668, (714) 385-7000. Some firms charge a small fee, around \$10. You may find the companies listed in the Yellow Pages under Credit Reporting Agencies.

Examine any item you think is incorrect and discuss it with a counselor at the appropriate agency. In the case of a delinquent bill, after you check your own records, the

agency checks the item with the lender and adjusts your record accordingly. Unfortunately, any instances of failure to make payments on time, such as late credit-card payments, are not deleted until seven years from the last activity in that account.

Once you have removed past blemishes from your records, you can keep your credit rating clean by paying bills promptly.

A READER RESPONDS

In your September column, you suggested that Tim Yip move up to *WordPerfect 5.0* to get a good selection of fonts. But if Tim, like me, does not have a hard-disk drive, there's another choice. I use *WordPerfect 4.2* with *Lettrix* (Hammerlab Corp., 938 Chapel St., New Haven, CT 06510, [800] 351-4500). For roughly \$100, I have a choice of 20 different typefaces in four sizes. Coupled with a good old standby like the Epson MX-100, it produces results that rival those of the new 24-pin printers for letter quality.

BOB DAVIES
Newmarket, Ontario, Canada

BUSINESS OPPORTUNITIES

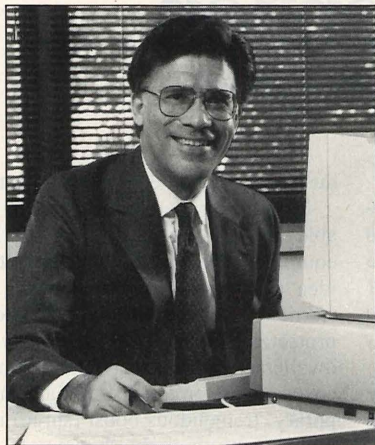
How do you raise your fees from the scale you used when you first began your business? It's simple enough to increase your rates—the question is by how much. You're less likely to lose business if you increase fees by small increments fairly regularly, say every year or two, rather than waiting until you are forced to double your rates.

Quote the higher scale to new clients, and inform existing clients upon your next agreement. If you are helping someone on a continual basis, give a rationalization for the updated rates or time your announcement to coincide with the new year. ■

SEND US YOUR HOME-OFFICE QUESTIONS

Send your questions on taxes, legal issues, developing a business plan, capitalizing, marketing and public relations, or any other business-related issues to Joanne H. Pratt, c/o ShopTalk, HOME-OFFICE COMPUTING, 730 Broadway, New York, NY 10003. Please print your name, address, and telephone number on all correspondence. Pratt is a nationally known researcher, consultant, and speaker on the subject of home business.

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EDITED BY JEFF DONAHUE

HAZARDS IN YOUR HOME

Q. Concerning static electricity, magnetism, tobacco smoke, and lightning: Just how careful need I be, and what precautions do I need to take to guard the equipment in my home office?

PHYLLIS ALLARD
Amarillo, Texas

A. You seem to have covered just about every computer hazard except earthquakes (see our December 1988 issue) and spilled liquids (clean them up fast!).

Static, as innocuous as it may seem, can wreak havoc on electrical equipment. A single charge, accumulated invisibly in your body, can release a 3,000-volt zap into one of your expensive machines! Most people are acquainted with "carpet shock," which can build up just from walking a short distance. Rubber-soled shoes, which keep your body from being grounded, wool sweaters and other loose-knit clothing, and very dry weather all contribute to static. A basic precaution is to touch a grounded metal object immediately before using electrical equipment. This should dissipate most of the charge you carry. More elaborate measures include antistatic mats to place under your computer, chair mats for the floor, and antistatic sprays for carpets and clothing.

In the November 1988 issue, we answered a question about magnetism (see "Data Protection" on page 20 of that issue). The most important thing is to keep floppy disks, hard-disk drives, and magnetic tapes away from machines that have motors, transformers, or that produce sound. This also means you shouldn't put your floppy disks on top of the disk drives or on top of the monitor.

Smoke and dust present real dangers to many types of equipment, especially computers. Particles that work their way inside a computer can cause overheating, prevent good connections with interface boards, interfere with the read/write heads in a disk drive, cause short circuits, and generally make your machine act quirky. Some of these problems can occur in other electronic equipment such as printers and monitors. Preventive measures you can take include not smoking near equipment, cleaning exterior surfaces with a lint-free cloth, cleaning interiors with high-pressure air guns, and using

dust covers when equipment is not in use.

In some rural areas, wiring can be unreliable and lightning a big worry. To keep your equipment from getting sizzled, it's a good idea to either unplug everything during a storm or have it all plugged into a surge protector. This device is handy for city dwellers, too, because air conditioners, appliances, and even televisions can cause a temporary, tremendous boost (surge) in the current running through a home.

The Lyben Computer Systems catalog includes all the types of products mentioned here and a wide range of others. To order this catalog, write to the company at 1050 E. Maple Rd., Troy, MI 48083, or call at (313) 589-3440.

TANDY DESKMATE 2

Q. Why won't Tandy DeskMate 2, which works on a Tandy 1000TX with MS-DOS 3.2, work on my IBM compatible with MS-DOS 3.3?

JIM FERGUSON
Shreveport, Louisiana

A. Assuming that nothing is physically wrong with the disk, I'm willing to bet that the problem is video related. When Tandy was marketing *DeskMate 2*, it offered two separate packages. The first package was for the Tandy 1000s and 2000s. It included a video driver that supported the graphics systems of both computers. The second package was for IBM-compatible machines and came with a standard video driver.

Tandy discontinued marketing the *DeskMate 2* packages in mid-1987 and released *DeskMate 3*, which comes with many video drivers, including the Tandy drivers, CGA, EGA, VGA, and one for Hercules graphics. For ordering information you can call (800) 442-2425.

If you have technical questions or computer ailments that need diagnosis, our technical staff will try to help. Although we cannot answer each letter personally, this column will deal with frequently asked questions and common problems. We reserve the right to edit letters for length and clarity. Please include your name, address, and phone number with all correspondence. Send your letters to Clinic, HOME-OFFICE COMPUTING, 730 Broadway, New York, NY 10003. ■

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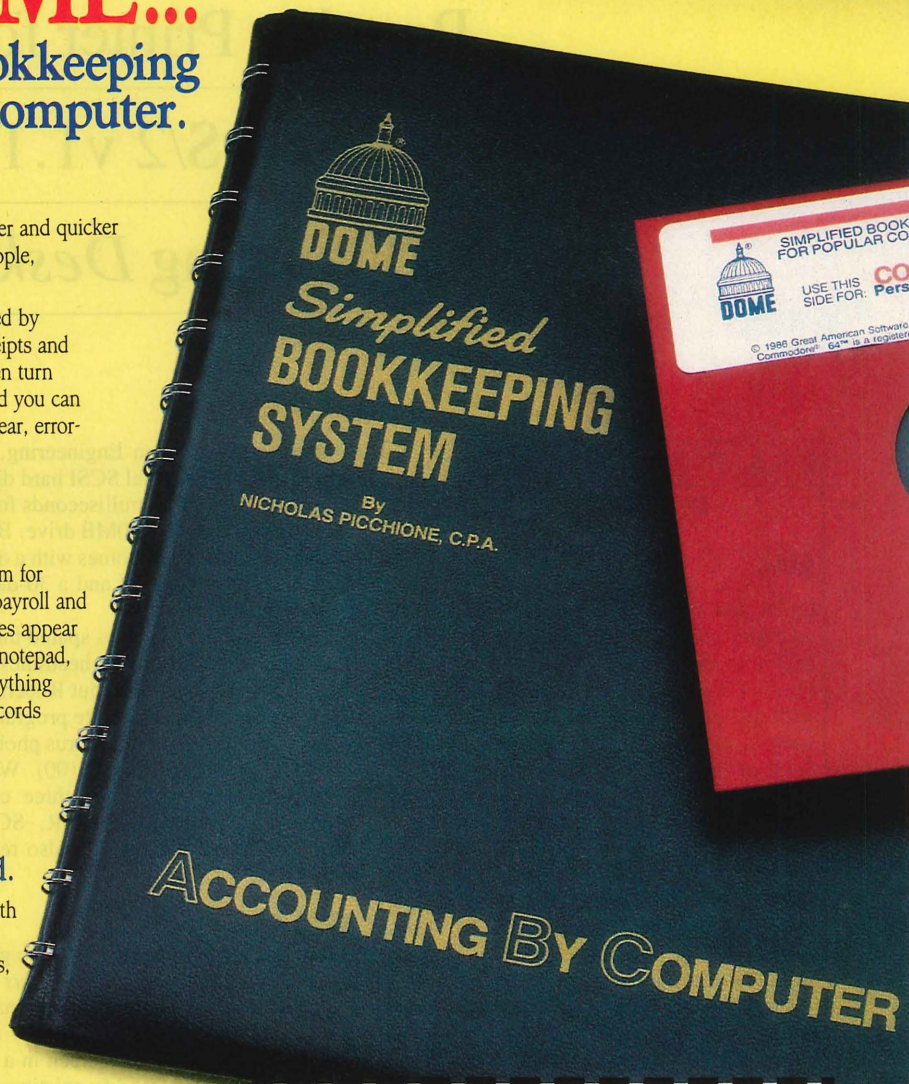
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Portable Printer for Mac

OS/2 v1.1

Upgrading *DeskMate*

APPLE/MAC

BY JIRI WEISS, JR.

MAC

Death and taxes are inevitable, and though your Mac can't help you avoid the first, it can help with the second. If you own Microsoft *Excel* or *Works*, you can calculate your taxes with the aid of templates from Heizer Software, a mail-order outfit that markets hundreds of low-cost templates and *HyperCard* stacks. Heizer's *1988 Personal Tax Templates* (\$35) comes with 34 forms and schedules and a variety of depreciation worksheets. California, New York, and Minnesota state supplements are available for \$15 each. The *1988 Business Tax Templates* (\$45) is for filing corporate, partnership, and fiduciary taxes.

The Small Print. For Mac users on the move there is now a Macintosh-compatible three-pound ink-jet printer that fits inside a briefcase and can print up to 150 pages on five rechargeable size C batteries. With a printing resolution of 192 dots per inch, the WriteMove printer (GCC Technologies; \$699) gives you quality somewhere between that of an ImageWriter II and a LaserWriter.

WriteMove is a QuickDraw rather than a PostScript printer, so you won't be able to print art created with a PostScript drawing package such as Aldus *FreeHand* or Adobe *Illustrator* 88 at better than bitmapped quality. However, WriteMove comes with six outlined fonts that can be scaled and manipulated so you can print any size fonts at full resolution.

More DAs. For desk-accessory—DA—and font freaks, Fifth Generation Systems is now shipping *Suitcase II* (\$79), a new version of the program that lets you access hundreds of typefaces and DAs without going through the *Font/DA Mover* utility. Also, *Suitcase II* displays the names of the fonts in their own type styles in the font menus of most applications, which is helpful if you can't remember what Chicago or Bookman looks like.

Low-Cost HD. Ehman Engineering, Inc. is selling a 32MB external SCSI hard disk with an access speed of 23 milliseconds for \$499, the price of a low-cost 20MB drive. Based on Seagate technology, it comes with a one-year parts and labor warranty and a 30-day money-back guarantee.

Virophobia. The Mac was spared the UNIX virus that made front-page headlines around the country in November, but Robert Woodhead, author of the shareware program *Interferon*, is riding the wave of virus phobia with *Virex* (HJC Software Inc.; \$100). While *Interferon* merely checks for three common strains of Mac viruses—nVIR, SCORES, and MACMAG—*Virex* will also repair infected files.

APPLE II

Terrapin Inc. has upgraded its Logo graphics programming language. *Logo Plus* (128K Apple II; \$120) includes 75 additional commands and features. Among them are the ability to type text on the screen in a variety of colors and styles, modify existing character sets or create new ones, change the cursor shape, and flip, zoom, or animate shapes. *Logo Plus* comes with a sample disk of more than 40 programs.

GS Communications. Activision's long-awaited *Teleworks Plus* for the IIGS, a \$100 telecommunications package for accessing

information banks and on-line services such as CompuServe and The Source, is finally here. Activision/Mediagenic has also been busy upgrading its entire line of IIGS products for Apple's System Software 4.0. The upgrades, available for all products, cost about \$5 each.

JIRI WEISS, JR. is a freelance writer based in Berkeley, California, and can be reached at MCI mailbox JWEISS.

IBM/MS-DOS

BY HENRY F. BEECHOLD AND
STEVE MORGENSTERN

Version 1.1 of OS/2 came out on time, and it actually works! The big change over Version 1.0 lies in the graphic interface called *Presentation Manager*, which looks like a combination of the *Windows* and Macintosh interfaces. For those of you with 286 and 386 computers, *Presentation Manager* seems right in touch with the way you expect screens to look and computers to behave these days: The graphical user interface allows multitasking in multiple windows.

—H.B.

Key Considerations. The best thing that's happened to my computer lately is the Omni-Key/102 keyboard from Northgate Computer Systems. Many of us wouldn't think of changing keyboards, but the Northgate keyboard (\$99) is a worthwhile upgrade that has made a real difference in my everyday work.

What's so special? First, the feel of the keys as I type. They click just enough to let me know I've hit the key square on, but they're not clatteringly loud. Using the Northgate keyboard, I know instantly if I've missed a keystroke. More important: A good typist can type faster on keys that feel crisp instead of mushy.

The other winning feature is the location of the function keys—on the left-hand side, like on the good old PC keyboard. I've never liked having the function keys strung out

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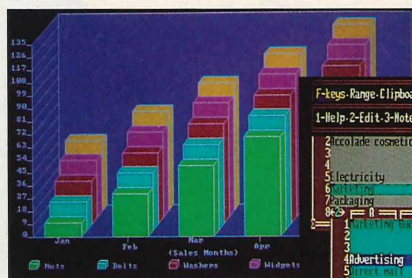
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You can open unlimited windows (up to nine on a screen) in different directories, drives, & 3-D levels.

mouseability and both a reference and tutorial manual. These features alone make this spreadsheet a must buy at only \$99.95. It's no wonder Lucid 3-D was voted Editors' Pick for 1988 by Home Office Computing.

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CIRCLE READER SERVICE 34

across the top of the keyboard—the reach upward is uncomfortable and breaks my typing rhythm. —S.M.

Talk Is Cheap. For a long time I've been telecommunicating with a reliable old 300-baud modem. For short messages on short hauls, 300 baud is okay and won't break the bank account. Not being a heavy user of this method of communication, I never got around to buying a 1200-baud unit. And when the 2400s came out, they were just too expensive. Not long ago, however, I spotted one priced at \$95. Could I resist? No! But what would I get for my money? Surprise! The CompuCom CCC 2400 inboard modem is a little gem.

The half-length board appears well laid out and manufactured to high standards. Designed for the IBM PC/XT/AT slots, it supports the Hayes command set and all of the current telecommunications standards and protocols appropriate to modems of this type. There's a built-in speaker, controlled with a hardware volume knob or software command, built-in diagnostics, auto fallback to lower speeds depending on the speed of the answering modem, auto answer, and a number of other features you wouldn't expect to find in a 2400-baud modem at this price.

—H.B.

Ordering A La Carte. I've written about

XyWrite III Plus here before. It's the word processor of choice for many MS-DOS-based magazines and newspapers—very fast and loaded with features. It also has a reputation for being difficult to learn.

In an effort to make the program more accessible, publisher XyQuest has added a significant new capability—a menu system they call *A La Carte*. It will be included as part of the basic program from now on and is available as an upgrade for current users at a reasonable \$30.

A La Carte adds a Lotus 1-2-3-style menu to the word processor, with logical organization, good on-screen prompts, and easy access to the program's rich set of features. One of the best parts of *A La Carte* is that you don't have to use the menus to use the program—you can pop them up when you want them and issue standard XyWrite commands when you don't. That makes it useful even for seasoned XyWrite users who won't want to muck around in menus to handle the familiar basics, but may turn to the menu system to access a seldom-used function. —S.M.

Backing Up. Having recently suffered a hard-disk burnout, I know the value of backups. *Back-It* (Gazelle Systems; \$130), a menu-driven program (with a command-line parameter option for those who eschew menus), is among the speedier of the backup

programs—about 10MB in eight minutes on a PC and four minutes on an AT—and uses a dual system of error protection/prevention. It will tell you in advance how many disks you will need for the operation. For example, the 12,919,928 bytes on my hard disk require twenty-one 720K floppies. If you haven't formatted the disks, *Back-It* will do the job for you. Of course, this will increase backup time.

Since there's no arguing about the need to make backups, the only question is how to do it. An inexpensive and almost automatic method, *Back-It* makes good sense. —H.B.

HENRY F. BEECHHOLD is the author of *The Brady Guide to Microcomputer Troubleshooting & Maintenance* (Brady Books, Prentice Hall Press, New York).

STEVE MORGENSTERN can be reached on CompuServe (ID:72545,606).

TANDY

BY STEPHEN MILLER

Most of us who make a living keeping up with the latest and the greatest in the computer industry sometimes lose sight of what's happening in the real world. I've become spoiled by access to the fastest machines, the

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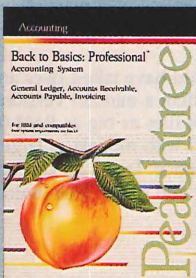
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sharpest monitors, and the latest software. That is wonderful from the perspective of keeping up with a fast-moving industry, but I shouldn't forget that most of us can't afford to keep totally current. The fact of the matter is that I can't either. If companies didn't make products available for review purposes, I'd be using a two- or three-year-old computer.

I was reminded of this by Ed Juge, Tandy's director of market planning. He sends out a monthly newsletter to Tandy user groups updating them on what's new with Tandy. In a recent issue he responded to the complaint that too much emphasis is placed on new equipment and the feeling that Tandy has abandoned the owners of the older computers. While Juge doesn't come right out and say it, the fact is that Tandy is in the business of selling the latest technology. But Juge makes the valid point that "the introduction of a new model does not alter the capabilities of your [older] computer at all. It still provides the same features, benefits, and performance it did when you bought it, no matter how good the new model looks."

Upgrading DeskMate. Speaking of the old and the new, if you are a *DeskMate* user and are thinking of upgrading to *DeskMate 3.0*, you should be aware of the differences in the various versions and which files are upward-

ly mobile. Tandy gives the following guidelines:

1. All versions of text files are upwardly compatible. A few special characters may have to be manually deleted once in the new *DeskMate*, but the whole file will move up.

2. Except for the shared calendar in *Professional DeskMate*, the data files in the graphic versions of *DeskMate* (that is, *Personal DeskMate*, *Personal DeskMate II*, *Professional DeskMate*) are also upwardly compatible.

3. Older versions of *DeskMate's* data files (in *DeskMate*, *DeskMate II*, and *DeskMate PC*) are not compatible.

Lining Up for the Phone. I've got two phone lines in my home office. That sounds like enough for a one-man operation, but those two lines must serve two phones, an answering machine, two modems, a fax machine, and a fax board. That's seven telephone devices vying for the two lines. It wasn't the clash over which device would be on-line at any one moment, but the almost constant plugging and unplugging of telephone wires that was driving me crazy. My main number is for incoming and outgoing voice calls, the answering machine, and a modem when the other line is tied up faxing or modeming. The second line is for the modem (which doubles as an autodialer) and the two facsimile de-

vices. There is also a problem trying to remember which device should be connected to which phone line. I've missed a couple of important calls because I reversed the lines and had callers greeted with the high-pitched squeal of the modem or the fax machine. Likewise I've gotten squealed at when I picked up the fax/modem line thinking it was the voice line.

I found a solution in the telephone section at Radio Shack: adapters that allow you to plug multiple telephone devices into one line. I no longer have to unplug anything when I want to use a device connected to the phone. The main phone and the answering machine are connected to the voice line with a two-plug adapter (cat no. 279-357, \$4.95) and the data line has a five-plug adapter (cat no. 279-410, \$9.95) to handle the phone, the fax machine, the modem and the fax board. I'm waiting for a three-plug adapter so I can hook up the second modem. I still have to swap cables in order to use it. I haven't tried it yet, but there is also an adapter that would allow me to bring my two individual lines into a two-line phone (cat no. 279-401, \$6.95). ■

STEPHEN MILLER can be reached on Tandy's PC Link on-line service (ID: PCSTEPHEN) where he hosts the hardware forum.

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MS-DOS Word Processors for Desktop Publishing

BY JOEY LATIMER

How to Marry Graphics to Text Using Microsoft Word, WordPerfect, or WordStar Plus 2000

The capacity to combine words and pictures has always been a strong selling point for the Apple Macintosh. But now, documents produced on IBM compatibles—with the latest releases of Microsoft *Word*, *WordPerfect*, and *WordStar Plus 2000*—are fooling people who assume that such work can be done only on a Macintosh.

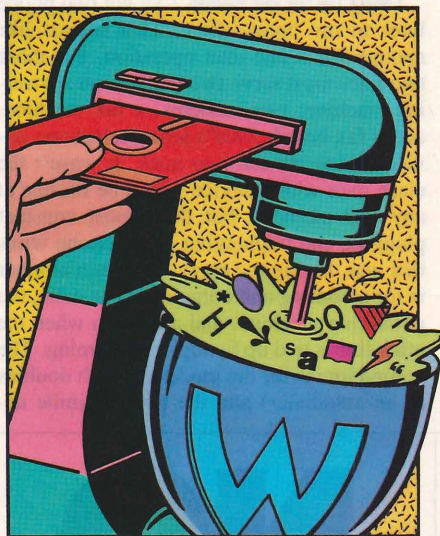
Each of these mainstream MS-DOS programs unites text and graphics in its own way. But though they lack a standard user interface such as that used by Mac word processors, all three have features to help you create your own newsletters, stationery, catalogs, technical diagrams, manuals, menus, advertisements, invitations, and invoices—without the additional expense of a desktop-publishing program. For a small business, this means an immediate savings of money and time.

Merging graphics and text on a Macintosh is usually an elegant, predictable dance performed by mind, hand, and mouse. Once I got used to the command sequences of *Word*, *WordPerfect*, and *WordStar Plus 2000*, the process was just as easy with the MS-DOS machines. I found that my PC could also do attractive work—some of which I've never seen on a Macintosh.

PICTURE THESE FEATURES

When it comes to graphics, each word processor gives you different tools. Here are summaries of the programs, followed by tips on combining images and text.

Microsoft Word. By itself, version 4.0 of Microsoft *Word* was limited in its ability to add graphics to a document. You embedded codes in the document to tell *Word* where to



insert a graphics file for printing. But this was a crude way of marrying graphics to text, and it was limited by a lack of formatting options. However, if you used *Word* with Microsoft *Windows* and *Pageview*, a page-preview and graphics utility, you could combine graphics screens captured in the *Windows* clipboard with *Word* text documents. The result was a *Pageview* file that could be printed, modified, and saved for later printing or viewing.

Now, with the recently released version 5.0, *Word* incorporates all the graphics capabilities that *Pageview* once supplied. For instance, the Show Layout function displays the page on-screen with a box where the graphic will be placed. Although you don't see the final image, the box is the same size as the graphic and displays its dimensions and file name. You can move it around on-screen and edit as desired. The Print Preview function, on the other hand, lets you see the actual graphic and how text and graphics fit on the page, but you cannot work with the document in this mode, nor is the text very legible.

When it comes to formatting pages or combining text and graphics, *Word* is the most Mac-like of the three MS-DOS-com-

patible word processors. You can use pull-down menus and an optional mouse to create layouts and insert pictures into documents. The main drawback of *Word* is that you still can't change the document while the graphic is shown on-screen. Still, inserting graphics into any document is more direct with *Word* 5.0 than it was using the old 4.0 version.

WordPerfect. Extensive menu-driven graphics capabilities that let you format and insert images are built into *WordPerfect* 5.0. When you press a function-key combination, you are greeted with a menu that gives you the option of working on a figure (graphic), table, box, or line. Each of these options has a submenu of its own.

Graphics can be moved, scaled, rotated, and inverted to suit your needs. You can create and position boxes filled with either text or images, and then have text wrap around them. You can even add drop shadows for a truly professional look. Line drawing allows you to create boxes, graphs, and borders. With *WordPerfect*, you can view the whole document before you print it—at twice its normal size if you prefer. When you do this, headers, footers, footnotes, endnotes, margins, and page numbers—as well as graphics—are displayed along with the text. Just as with *Word*, however, you cannot edit while viewing the page.

I found *WordPerfect* versatile for integrating words and images. The program supports popular graphics file formats including .PCX (*PC Paintbrush*), .PIC (*Lotus 1-2-3*), .IMG (*GEM Paint*), .MSP (*Microsoft Windows*), and several more.

WordStar Plus 2000. Version 3.0 of *WordStar Plus 2000* is loaded with features for producing documents filled with both graphics and text. (*Plus 2000* is different from the classic *WordStar*, *WordStar Professional*, reviewed last month.) *WordStar* uses a separate utility called Inset to help manage graphics. Since Inset is memory resident, you can use it while you run a spreadsheet or graphics program to capture an image. You can also use the menu-driven program from DOS or within *WordStar* to modify or create an image.

Once you capture an image, you can re-

JOEY LATIMER writes about computers for several magazines.

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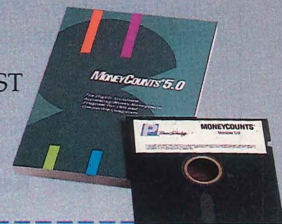
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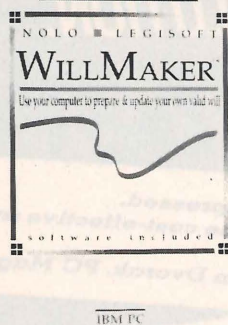
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size, clip, rotate, or touch it up. If you prefer, you can use a mouse to draw or paint an image. Inset painting commands include line, rectangle, circle, dots, magnify, text, and fill. You can configure Inset to work with other programs—such as *AutoCAD*, *Dr. Halo III*, *Lotus 1-2-3*, and *PC Paint*—as well as most popular graphics displays and printers.

WordStar Plus 2000 worked well in concert with Inset. Of the three word processors, the combination seemed to give me the most control over refining the image I wanted to insert into the text. However, it also took the most time to learn.

SEVEN STEPS FOR COMBINING TEXT AND GRAPHICS

Step 1. Experiment. If you're not sure which graphics features your word processor has, now's the time to find out. Try experimenting with some of the samples in the program's manuals. Practice placing different kinds of images, borders, and boxes into sample documents. This step is important because it will give you a feel for what your word processor can and can't do.

Step 2. Make a master plan. Before cutting and pasting, it's best to develop a rough draft. Imagine the page layout in your head, then draw it on a scratch pad, graph paper, or with a paint or draw program. Think about the art, borders, boxes, pictures, fonts, and colors you want. Decide if the text will wrap around the graphics and if you want both text and graphics in columns.

If you are creating a newsletter, for example, you might sketch out three columns of text, with a large headline on the top of the page. You could put a framed picture and a caption in the middle of the page. Or you may wish to place a decorative border around the entire page. A preliminary sketch will save you frustration down the road.

Step 3. Locate graphics. There are several ways of acquiring graphic images for use in documents. You can design your own using a paint or draw program, digitize them using an optical scanner, capture them from other programs using a graphics-capturing utility, or use canned graphics called clip art (see *Desktop Publishing in this issue for more about clip art*). The graphics files must be saved in a format your word processor can read; check the program's reference guide for the type(s) of graphic files that will work.

Step 4. Prepare graphics. Preparing graphics to be inserted into a document often means loading the images into a paint program, then trimming or sizing them. Once an image has been readied, copy it into a temporary file to be merged into your document later. If you don't have a paint program, you'll have to use graphics that have already been prepared for insertion. Both *WordPerfect* and *WordStar* come with ready-to-use

artwork; other companies are in the business of supplying clip art in various formats for this purpose.

Step 5. Insert graphics. Inserting graphics into documents can be done before or after the words are typed, depending on the program and your preference. Borders, frames, and logos are commonly the first graphics to be placed on a page, with other images added later. Of course, this too depends on how your word processor functions. With *WordPerfect*, for instance, I found it best to place boxes and graphics first, then add the text. When using *Word*, on the other hand, it seems better to add the graphics to text.

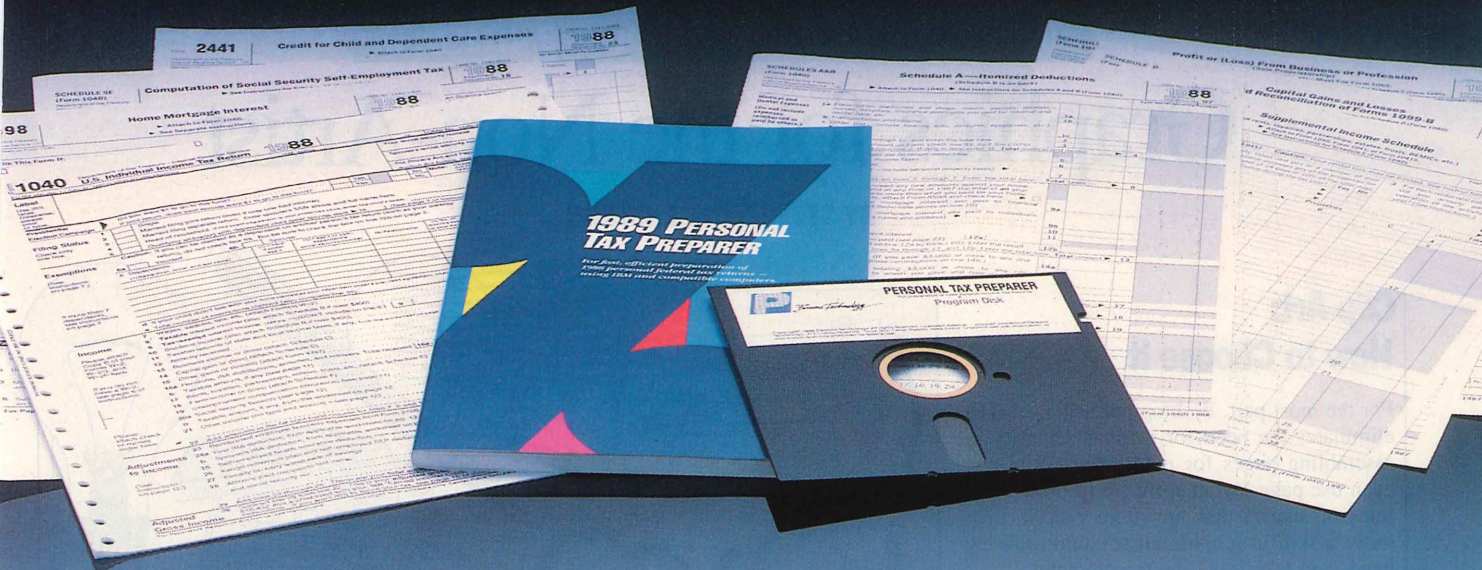
Step 6. Format and reformat document. Achieving a balanced, professional, and pleasing look usually means changing pictures, text, font sizes, lines, boxes, and other elements several times before the puzzle fits together. Think of it as a gradual tuning process. Sometimes a simple keystroke, or movement of the mouse, throws everything out of whack, so save your files regularly. It takes a lot of work to recover them.

Step 7. Print document. Before you print your completed document, make sure that your word processor has the correct driver for your printer. If you have a color printer, then you may have to deal with color mixing. I've found that colors don't always look the same on screen as they do on paper. Often, you must go back, adjust the colors, and make several new printouts before you get what you want. If your printer prints in black and white, experiment with different print settings for the best results. Sometimes selecting final-print, double-strike, or correspondence quality causes printouts to be too dark and, likewise, choosing draft quality often results in printouts that are too light. The best-looking documents are usually produced after several test prints and minor adjustments.

THE FINAL STEPS

Another important factor in making good printouts is the type of paper you're using. If you are using an ink-jet, thermal, or laser printer, make sure you have the appropriate paper for that machine. I've noticed that dot-matrix printers will print fairly well on most kinds of paper, but other printers tend to produce poor results if the paper doesn't have the proper smoothness and absorbency.

If you don't own a very good printer, or if your printer's output still doesn't cut it after you've tried everything, save your document to a floppy disk and take it to a print company or copy shop that has a compatible computer hooked up to a high-quality laser printer. Some printers advertise compatibility with popular programs and file formats, but others require that you bring a copy of your word processor, as well as the document. Call first. ■



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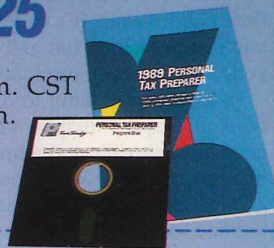
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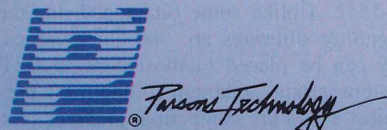
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CIRCLE READER SERVICE 47

Graphics for the Non-Artist

BY STEVE MORGENSTERN

Clip Art: How to Choose It

For the most part, desktop publishing (DTP) eliminates the need for manual dexterity in assembling pages for publication. You can even use page-layout software to draw basic lines or shapes that are more precise than those a skillful graphic artist could draw by hand, and take less time to complete.

That's fine for creating rules, boxes, and circles, but it's not much help when you want a picture of Santa for your December issue, or a flower to illustrate a gardening story, or small images of credit cards to drop into an order form. That's where clip art comes in.

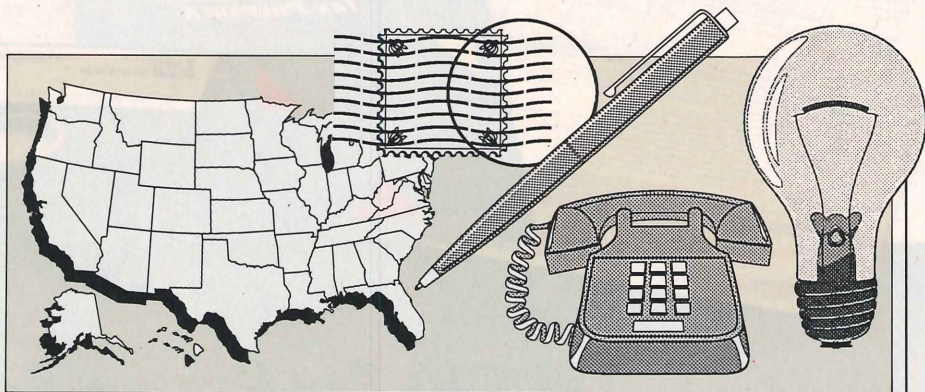
The clip-art concept didn't start with DTP. Publishers have long relied on books and subscription services to provide ready-to-run artwork, either old enough to be free of copyright protection or newly created and licensed to the purchasers for inclusion in their publications. It's called *clip art* because you can just clip it out and paste it down on your camera-ready mechanical.

In making the jump to disk-based collections of graphic images, clip art became at once more flexible and more complex—flexible because the artwork could be easily sized and altered right on the computer, complex because of the variety of file formats and image resolutions available for both MS-DOS and Macintosh computers.

MAKING THE IMAGE FIT THE FORMAT

Clip art is widely available in three formats: *bitmaps* (such as *MacPaint* files for Macintosh, or *PC Paintbrush* files for MS-DOS systems); *object-oriented* drawings (the Macintosh PICT file format used in *MacDraw*, for example, or CGM files in *Harvard Graphics* and GEM files in *GEM Draw Plus* for MS-DOS); and *PostScript* artwork (created with programs such as *Adobe Illustrator 88*, *Aldus FreeHand*, or *GEM Artline*). Today's top DTP applications will accept all three formats. However, there are advantages and disadvantages to each.

Bitmapped graphics are dot-by-dot representations of pictures. These images are created to print at a specific resolution—generally either 72 dots per inch (the resolution of the Macintosh screen and the ImageWriter printer) or 300 dots per inch (the resolution



Samples of PostScript clip art from T/Maker's EPS Illustrations.

of most laser printers and MS-DOS paint programs). Bitmapped images are easy to edit—just load them into a compatible paint program and manipulate them dot by dot. They are also less expensive than other clip-art formats. In fact, such images are widely available in the public domain.

The tricky part comes when you try to change the size of a bitmapped graphic. Enlarging an image spreads out the dot pattern, deteriorating the graphic quality. Shrinking it may produce jagged edges and blotchy sections, particularly if there are patterned areas involved. However, if you shrink an image by even amounts—halve it or quarter it, for instance—it should look okay.

Both object-oriented graphic images and PostScript graphics consist of a description of the lines required to make up the image, rather than a dot-by-dot map. That means you can change the size of the image freely, and even distort it horizontally or vertically, without degrading the quality of the lines. Also, these images will print out at the maximum resolution of your output device. Those curves and slanted lines that print out decently on your laser printer will be entirely smooth and sharp if you print the file on a Linotronic typesetting machine.

An image in pure PostScript format will not display on-screen in your DTP application. To solve this problem, a file-format standard called Encapsulated PostScript (EPS) was established. EPS files—which come in either Mac or MS-DOS versions—include both the PostScript description of the image (which goes to the printer) and a bitmapped screen image that lets you place, size, and crop the picture within your page-layout program. Another advantage of the EPS format standard is that both Macintosh and MS-DOS programs will accept the same file; in this instance, however, the screen images aren't interchangeable (you'll see a blank square on-screen when using the other

system's version), but the printable PostScript code is.

The downside of object-oriented and EPS clip-art graphics? They're more expensive than bitmapped images and more difficult to edit.

SHOPPING FOR CLIP ART

You will rarely find an extensive selection of clip art on your local software store's shelves. The best way to shop around is to call or write for catalogs directly from the publishers, then order by mail. Here are some sources to consider:

T/Maker, 1390 Villa Street, Mountain View, CA 94041; (415) 962-0195. All packages are part of the *ClickArt* line: *EPS Illustrations* (PostScript), *Business Images*, *Personal Graphics*, *Holidays*, *Publications*, and *Christian Images*. All come in both Macintosh and MS-DOS formats; and all but the *EPS Illustrations* are bitmapped.

GoldMind Publishing, 12155 Magnolia Avenue #3B, Riverside, CA 92503; (714) 785-8685. The *MacGraphics 3.0* collection is an extensive (533 images), eclectic grab bag of highly detailed 72-dot-per-inch (dpi) bitmapped art. Topics include everything from birds, trees, and plants to business graphics and transportation, plus handsome ornamental borders. Graphic styles range from old-fashioned to clean and modern. Despite the name, *MacGraphics 3.0* is available in both Mac and MS-DOS formats.

Metro ImageBase, 18623 Ventura Boulevard, Suite 210, Tarzana, CA 91356; (800) 525-1552. Unlike some bitmapped art, the *ImageBase* offerings are 300-dpi graphics. They can be placed in most popular DTP layout programs, although editing these files requires a 300 dpi-compatible graphics program. There are now 14 titles available in both Mac and MS-DOS formats, including *Food*, *People*, *Art Deco*, *NewsletterMaker*, and *Business Graphics*, with more coming.

Contributing editor STEVE MORGENSTERN can't draw worth a lick, but he designs attractive page layouts using clip art or digitized images.

Dubl-Click Software, 9316 Deering Avenue, Chatsworth, CA 91311; (818) 700-9525. The eight *WetPaint* bitmapped graphics collections include several volumes of crisp, modern designs and others consisting of digitized versions of old-fashioned engravings. The Mac-only disks include an excellent desk-accessory graphics program called *Art-Roundup* at no additional cost.

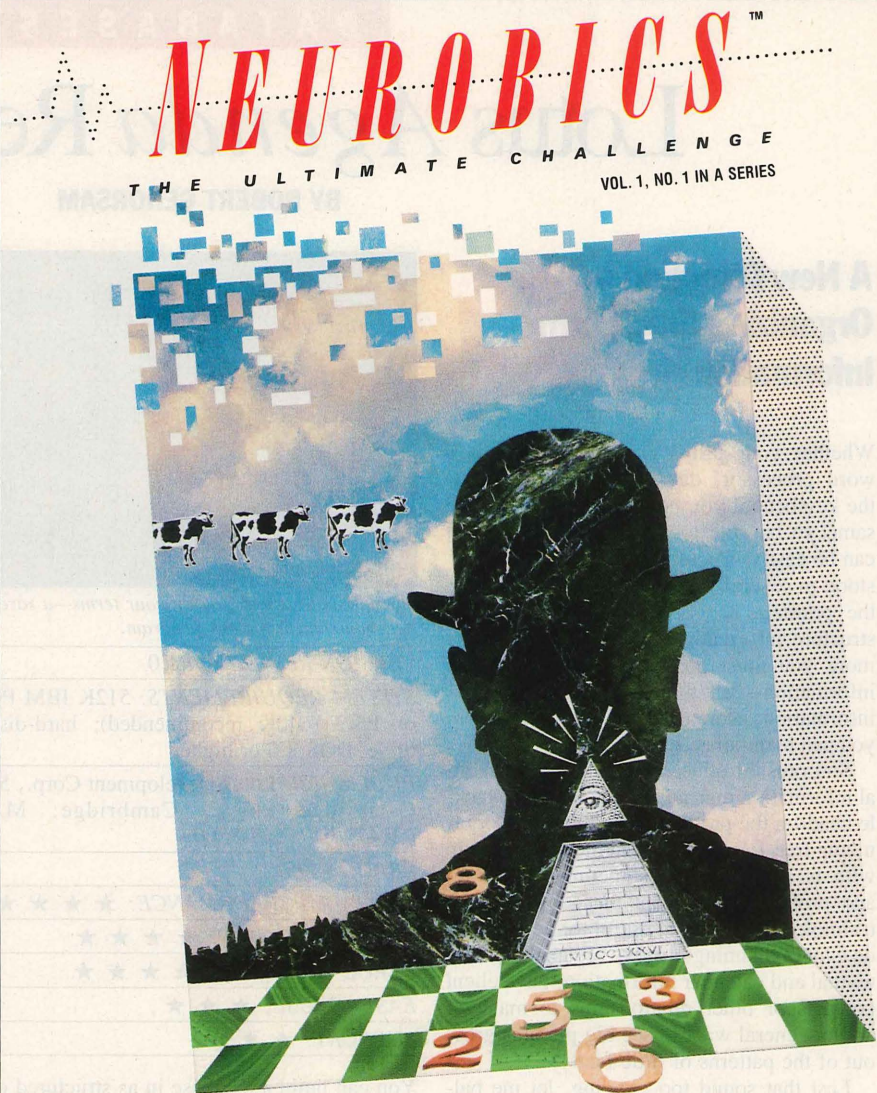
Image Club Graphics, 1902 11th Street SE, Calgary, Alberta, T2G 3G2, Canada; (403) 262-8008. While not all 10 volumes of these Macintosh EPS and PICT file collections called *Digit-Art* appeal to me (the *People* renditions are too cartoony for my taste), there is an excellent volume devoted entirely to maps (volume 7), very stylish modern images in *Miscellaneous* (volumes 1 to 3 and 8), and useful artwork in *Business & Industry* (volume 6) and *Design Elements* (volume 9).

Marketing Graphics Inc. (MGI), 4401 Dominion Boulevard, Suite 210, Glen Allen, VA 23060; (804) 747-6991, (800) 368-3773. Three businesslike *Publisher's PicturePaks* are available in bitmapped, object-oriented, and EPS formats for both MS-DOS and Mac users. The images are predominantly line art rather than heavily shaded illustrations, giving them a crisp, clean look and compatibility with many design styles.

Dynamic Graphics, Inc., 6000 North Forest Park Drive, Peoria, IL 61614; (800) 255-8800. A well-known publisher of traditional paper-based clip art, Dynamic Graphics offers *DeskTop Art*, eight thematic bitmapped clip-art collections in *MacPaint* and *MacDraw* formats for Macintosh users and 300-dpi *Publisher's Paintbrush* format for MS-DOS. Each of the volumes contains more than 200 handsome graphics organized around themes including *Graphics & Symbols*, *Borders & Mortices*, *Education*, *Business*, and *Health Care*. The company plans to offer EPS graphics soon, as part of a monthly subscription plan.

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If you're serious about desktop publishing, consider joining the **National Association of Desktop Publishers**. This independent organization, headquartered in Boston, provides a wealth of informative publications to its members, including a quarterly journal and a handsome bimonthly newsletter. Their style is detailed enough to be useful, but not overwhelmingly technical. The \$95 annual membership fee also includes free registration in the GENie on-line service (on-line charges are extra), where the Association maintains a forum. The fee is not inexpensive, but is justified by the quality of the publications you'll receive. For more information contact NADTP at P.O. Box 508, Kenmore Station, Boston, MA 02215 or call (617) 437-6472. ■



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Lotus Agenda Reviewed

BY ROBERT GEHORSAM

A New Direction in Organizing Free-Form Information

Whether your primary computer tool is a word processor, database, or spreadsheet, the key benefit you hope for is probably the same: to be able to create information that can be easily structured, viewed, and understood in several ways. Up to now, however, the problem has been that the more you structure information, as in a database, the more you must predefine and restrict that information—yet the more free-form your information, as in a word processor, the less you can manipulate it.

So Lotus introduced *Agenda* as a “personal information manager,” an attempt to tackle head-on the problem of intelligently organizing free-form data. What they’ve come up with is a fascinating, sometimes dazzling, and probably significant piece of software technology that will be useful for people who do a lot of planning, need to organize random textual and calendar information, have client contacts or other relationships to manage, and in general want to see big pictures grow out of the patterns of little facts.

Lest that sound too glowing, let me balance my praise by pointing out that *Agenda* can’t replace most of your current programs, particularly your word processor and spreadsheet. Although it’s a type of database (you use it to store information), *Agenda* represents a new direction in software.

HOW AGENDA HELPS ORGANIZE WORK

Simply put, *Agenda* lets you enter text in a relatively free-form manner, and decide later how you want to categorize and view it. This turns the traditional database concept on its head. In the old style, you had to define the precise formats—called fields—before you even knew what data you wanted to enter. So information on a client, for instance, would be arbitrarily restricted to fields set for a fixed number of letters or numbers—not terribly useful for much beyond name, address, telephone number, and other rigid data.

The *Agenda* style is based on the simple observation that as you work, you often don’t know how information should be categorized. *Agenda* lets you create first and understand later, a much more intuitive approach.

ROBERT GEHORSAM works for Prodigy, a new on-line service.



Agenda understands you on your terms—a rare accomplishment for any program.

VERSION REVIEWED: 1.0

SYSTEM REQUIREMENTS: 512K IBM PC or PS/2 (640K recommended); hard-disk drive; DOS 2.0 or higher

PUBLISHER: Lotus Development Corp., 55 Cambridge Pkwy., Cambridge, MA 02142; (617) 577-8500

PRICE: \$395

OVERALL PERFORMANCE: ★ ★ ★ ★

DOCUMENTATION: ★ ★ ★ ★

ERROR-HANDLING: ★ ★ ★ ★

EASE OF USE: ★ ★ ★

SUPPORT: ★ ★ ★

You can build a database in as structured or as unstructured a format as you need for a particular task. *Agenda*’s tools for accomplishing this goal include concepts such as *items*, *notes*, *categories*, *columns*, *views*, and *sections*.

You start with items. An item can be any phrase, like “Call Sally at Acme Distribution on Friday” or “Finish the marketing plans by next week.” An item is limited to 350 characters, but you can attach up to 10K of text (about seven pages) to an item as a note, which can be imported to or exported from *Agenda* as ASCII text.

From a loose collection of items and notes, you create categories and assign items to them. As your work in *Agenda* progresses, items are automatically assigned to categories in several ways. For instance, if you had a category named after your main client, Alice Jones, every item that contained her name would be assigned to her category. As the structural heart of *Agenda*, categories resemble fields in traditional databases or headings in outlining programs, but in fact they combine and amplify both.

You can arrange categories hierarchically, as in an outline, so if you have a subcategory Mr. Big under the Clients category, assign-

ing an item to Mr. Big also puts it into Clients. *Agenda* is extremely flexible about assigning items to multiple categories. You can set up categories that are mutually exclusive—such as High, Medium, and Low priorities on a project—or, in contrast, that contain synonyms. For instance, if you’re a sales manager, Northeast (for the northeastern territory) and Josephine Winder (the current salesperson for that territory) might be synonymous categories.

AGENDA’S GOT THE TIME

Agenda understands a wide range of time expressions. I was able to enter the phrase “Finish the report four weeks from two days before the day before yesterday,” and *Agenda* didn’t even pause (on an 8MHz machine) before returning the correct result. *Agenda* understands you on your terms—a rare accomplishment for any program.

A group of time-related, predefined categories handle calendar functions: Entry Dates (the day you entered the note), When Dates (the day something is supposed to happen), and Done Dates (the day a task item is completed and removed from the database). For instance, you might enter an item like “I told Paul to get back to me two weeks from yesterday about his talk with Lisa.” *Agenda* figures out exactly what day you mean, then inserts the calendar date in the When Date category. If you’ve created categories named Paul and Lisa, it will automatically assign this item to them as well.

VIEWING YOUR INFORMATION

Agenda can build a collection of items and categories up to 4MB in size. That’s big . . . very big. Besides meaning that you’ll need a hard-disk drive to run the program, this also implies that you’ll need to be able to make sense from a range of disparate information in different ways. The Views function helps you with this.

A View is akin to a database report. It allows you to select the categories on which to sort the database, which categories to display, and in what display format you’d like to see the information. You can store numerous Views for any database, and flip among them with a couple of keystrokes. So a salesperson can call up a View named Prospects and see what’s on the schedule, which call-backs are high priority, and what interaction is needed with the main office.

For those who expect a computer to be an intelligent assistant, *Agenda*’s Views function is a small miracle. In effect, it lets you say to the computer, “Show me whom I have

to call today" or, "What are my top priority tasks for the week?" And because the data is free-form, information once considered too trivial or inappropriate for entry into a database can now be seen in a new, potentially significant light.

AGENDA'S SHORTCOMINGS

Although the easy-to-use interface is based on Lotus 1-2-3's menus, learning *Agenda*'s concepts and then applying them to meaningful tasks can be quite a hurdle. It took me well over a dozen lengthy sessions before I really gleaned its power.

Agenda also has some functional weaknesses. For instance, while the program handles dates, it doesn't automatically insert times of day. Printing is atrocious—even printing a note as a memo is difficult with the limited available formats. Whatever print options do exist are displayed in arcane print parameter screens. I found myself exporting notes as ASCII files and formatting them in my word processor—resenting it all along the way.

And therein lies the main dilemma in using *Agenda*: It should really be a memory-resident utility (like *SideKick*) that you can pop in and out of during the day as you think of things great and small. But *Agenda* is greedy, requiring 512K to operate (640K recommended). In all fairness, Lotus has provided a memory-resident utility that lets you export from your word processor into *Agenda*; but the solution seems makeshift, and I simply couldn't get motivated to do the necessary rewiring.

WHO NEEDS IT?

Clearly, *Agenda* is technically intriguing and well designed. I've tried to illustrate the concepts and potential benefits of the program rather than fully delineate its functionality. The question is, "Do you need it?"

It's hard to say. The answer is probably no if you primarily analyze numbers or work with highly structured and repetitive information like mailing and membership lists, or if you always require well-formatted documents. But if you're involved in planning, creative development, or management of resources, or need to make sense of input from various incompatible sources (telephone messages, electronic mail, memos, brainstorming), then *Agenda* may be just the ticket. I would imagine that entrepreneurs just starting out would particularly love it, since that's when their creative juices are flowing faster than their ability to make sense of the ideas in a larger context.

However, because *Agenda* is new under the sun, and because it involves commitment, I recommend seeing a demonstration before shelling out hard-earned money. Failing that, call Lotus at (800) 345-1043 for a demo disk or videotape (\$15 each). ■

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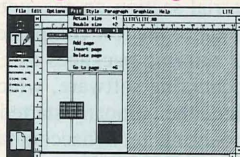
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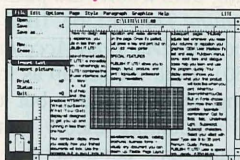
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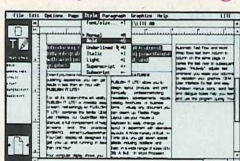
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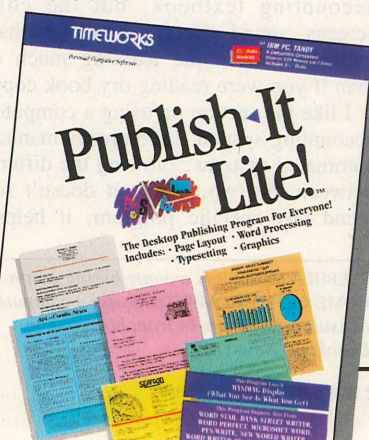
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Accounting Help!

BY STEPHEN MILLER

Video and Disk Tutorials That Teach You the Basics

Accounting may not be the most exciting subject in the world, but many people need to understand it. Staying abreast of finances is one of the most important jobs in any kind of business. But how can you keep an eye on the books if you don't know a ledger from a balance sheet? Fortunately, the same computer you use to run accounting programs can also tutor you in accounting terms and practices.

Most tutorials available on disk are tied to the training regime of a particular program: The instructions generally assume that the reader understands accounting. If you do, this approach is fine, but it can be a little daunting if you don't. If the idea of variances between debits and credits in your chart of accounts leaves your mind as empty as a blank ledger, you may find help in one of the packages reviewed here.

STAND-ALONE TUTORIAL

Training for Accounting (128K IBM PC; \$70), from Individual Software, Inc., teaches basic accounting principles and delves deeper into the various components of an accounting system. *Training for Accounting* gives lessons in understanding a balance sheet, reading a financial statement, deciphering a chart of accounts, and posting transactions; the program even has a section on how to use computers effectively in accounting.

Training for Accounting is menu driven, thus easy to use. Options allow you to set your own pace and emphasize certain concepts of accounting. You can stop at any time, go back over a lesson, or get some special help when you're stuck or confused. The content is as solid as that of a good accounting textbook, but the colorful screens, sound effects, charts, graphs, and animation make the learning much easier than if you were reading dry book copy.

I like the section on using a computerized accounting system. It compares manual and automated systems, showing the differences between the two. While it doesn't recommend any specific program, it helps you

Date	Transaction	Post Ref.	Debit	Credit
1987 Mar. 4	Equipment		1000	
	A/P			1000

The advantage of the journal is that it shows in one place for each transaction, all the accounts affected by that transaction and the amounts the accounts are debited and credited. Also included with each transaction is an explanation of what the transaction is for.

Transactions are recorded in the journal as they take place, so the journal is a chronological record of all transactions conducted by the business.

0 PRESS ANY KEY TO CONTINUE

Training for Accounting introduces the basics of accounting in a colorful and interesting format.

choose one by describing the functions that an accounting program should include.

Two leading software companies recommend *Training for Accounting* as a supplement to their accounting packages. Computer Associates includes it as part of the *AccPAC EASY Quick Start Accounting Pac*. Peachtree Software offers it as an option with the *Peachtree Complete II Business Accounting System*.

DISK AND VIDEO COMPANION TUTORIALS

While almost all accounting packages include a short tutorial section on accounting, *Dac Software* is one of the few companies to produce separate tutoring packages as companions to its accounting software, which is not surprising since the company started out by teaching accounting to nonaccountants. *Dac* has gone even further in accounting tutorials by selling both a software package, *Dac Easy Accounting Tutor* (256K IBM PC; \$30), and a videotape, *Dac Easy Accounting Video Tutor* (\$50). Both are set up as introductions to using *Dac* software, but their explanations of accounting theory can be used to understand any computerized accounting system.

The tape and the software are divided into several parts, beginning with bare-bones accounting principles. The video is particularly effective in its use of narration, charts,

graphs, and animation to establish the relationships of accounting components. (And recognizing that the lesson might be too much to absorb in one dose, the tape tells you to set your VCR counter so you can review sections of the video easily. At the end of each section, it reminds you to write down the counter setting so you can find that portion again.)

The computer tutor still has much of the flavor of a book on accounting. It requires more time and effort to get the maximum benefit than the video does because it gives you so many more details. But despite the subject matter's dryness, the authors have succeeded in making the components colorful, visually attractive, and understandable.

It is probably wise to invest in both the video and the disk. The tape gives an excellent overview of accounting and the disk version gives added depth. I recommend these two tutoring options, but keep in mind that they are produced as adjuncts to *Dac Easy Accounting*. After the overview of accounting, you learn only about the ins and outs of that program. Even so, the *Dac* video and disk tutors are a good source for the business owner who needs a basic understanding of the intricacies of accounting and are especially helpful if you choose to purchase *Dac Easy Accounting*.

REFRESHER DRILLS

For those who have had some accounting training, such as a course at a community college, but need more advanced tutoring, there's *Total Software's Pro Tutor Accounting* (128K Apple, C 128, 128K IBM PC; \$99). This drill-and-practice program offers real-life examples of accounting problems. You can test yourself with more than 3,000 sample transactions and receive an analysis of your strengths and weaknesses. The manual touches on the basics, but the program is best used as a refresher course.

Even if you're not the type of person to jump at a chance to learn or practice accounting, with a well-designed, graphically interesting tutorial you can easily absorb accounting terminology, study its methods, and begin to apply your knowledge to your own business accounts. ■

OVERALL PERFORMANCE OF ACCOUNTING TUTORIALS

(Ratings based on the four-star scale used in *Software Reviews*.)

Training for Accounting	★★★
Dac Easy Tutor	★★
Dac Video Tutor	★★★
Pro Tutor Accounting	★★

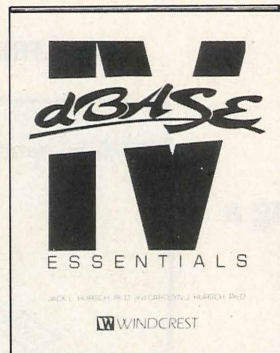
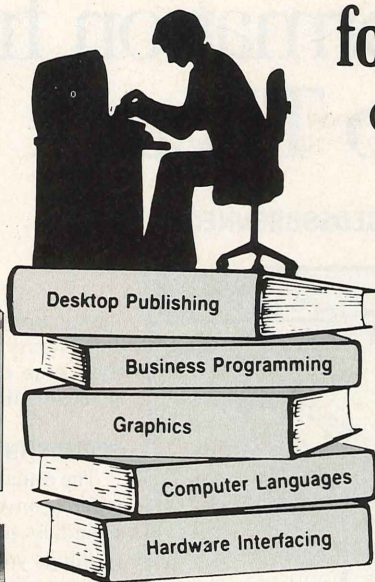
STEPHEN MILLER is a contributing editor to *HOME-OFFICE COMPUTING* and a computer consultant who works from his home in Brooklyn, New York.

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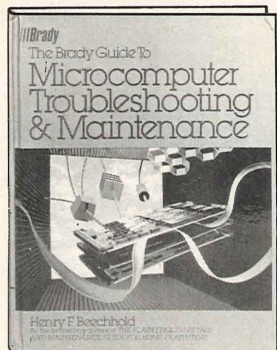
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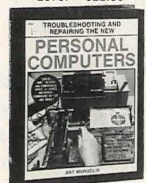
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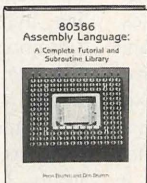
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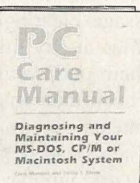
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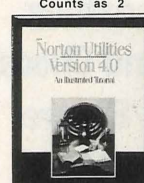
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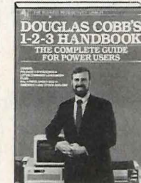
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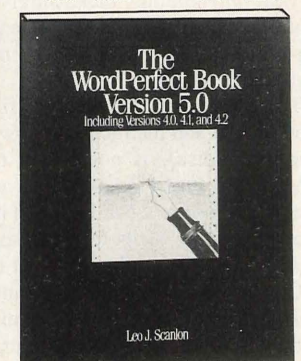
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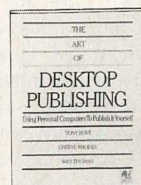
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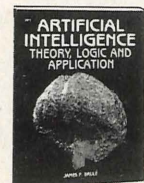
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Sending Information from Here to There

BY ALFRED GLOSSBRENNER

Tips on Formatting Your Text and Choosing a Protocol to Ensure Smooth Delivery of Messages and Reports

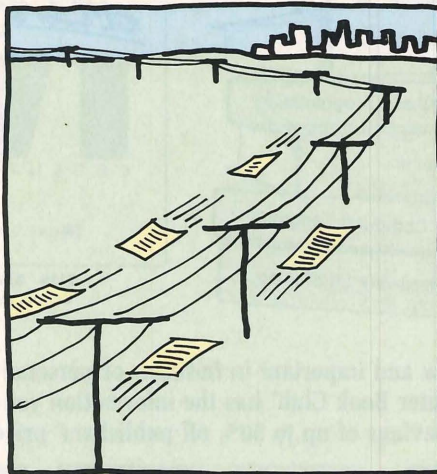
To transfer paperwork from point A to point B, you can use a fax machine (if both you and your client have one) or an overnight courier. In some cases, a fax or courier may be your *only* options. Increasingly, however, professionals and businesspeople are delivering goods directly from their computers using telephone lines.

The computer-to-computer file transfer (you upload and the recipient downloads and records to disk), is not a new method for sending and receiving messages and reports. But the method has been ignored by so many people, in spite of its relative ease and efficiency, that it warrants a second look.

Computer-to-computer file transfers are at least as fast as fax transfers and much cheaper than sending by overnight couriers. There are no waybills to fill out or courier deadlines to miss, and almost no chance of getting the endless busy signals you often get when trying to fax. Perhaps most important of all is that the information you send arrives in the correspondent's computer, ready to be edited or printed any way he or she likes. And from the correspondent point of view, almost any printout, especially a laser printout, will look better than a fax document.

It doesn't matter what kind of computers are involved, as long as both have modems and communications software. Macintoshes, Commodores, Apples, and IBMs all communicate text in the same language (ASCII).

ALFRED GLOSSBRENNER is the author of numerous books on computers and communications, including *The Complete Handbook of Personal Computer Communications*, *How to Look It Up Online*, and the just-published *Alfred Glossbrenner's Master Guide to FREE Software for IBMs and Compatible Computers*, all from St. Martin's Press.



ELECTRONIC MAIL

The best way to transfer a file is to use a commercial electronic-mail system like MCI Mail or CompuServe. There are other systems, but in my experience, these are the ones most businesspeople use.

All e-mail systems consist of large computers that act as message clearinghouses. You can upload your files at any time, and the system will store them until your correspondents sign on to check their mailboxes and download the contents. In or around urban areas, e-mail systems can be reached by calling a local network number, so in many cases, neither you nor your client has to pay long-distance charges.

Other charges are involved, of course. But although there are ways to compare on-line costs, a full explanation will have to wait for another column. For the moment, take it on faith that sending a file containing the equivalent of 15 pages of double-spaced text via MCI Mail will cost you about \$4. Uploading 30 pages will cost about \$8, and so on. On the other hand, sending one to 30 pages in a Federal Express Overnight Letter will cost you \$11 to \$14, depending on whether you drop it off or have it picked up.

Many e-mail systems can transmit your files to a client's telex machine as well, and a growing number offer store-and-forward facsimile services. That's particularly convenient if your client's fax machine is always busy or if you don't have a fax machine. Just upload your material to an e-mail system that offers this feature, such as CompuServe or MCI Mail, specify how long you want the

system to try sending it (in case the target fax line is busy), and sign off. The system will then keep dialing until it gets through, or your time limit expires.

FORMATTING YOUR TEXT

The e-mail system you choose will depend entirely on which one your client uses. But regardless of the system, there are a number of things you can do to give your text file a clean, professional appearance and make it a joy for the recipient to work with. First, since your client probably will not be using the same word-processing software you use, you must produce a pure ASCII text file. Such files can easily be brought into any word-processing program.

That means no boldface, special font characters, or underlining, which won't come through on the other end. If you want to emphasize a word, frame it with two asterisks like **this**. Use single-spaced lines and turn off your program's automatic hyphenation and pagination features. Double spacing, hyphenation, and page breaks often insert unwanted characters that can be difficult for your correspondent to remove should he or she wish to reformat the text.

For the same reason, you should set your left margin to zero. Setting it to anything else inserts hard-to-remove blank spaces at the beginning of each line. The right margin should be set to 65 since 65 characters per line is still the business standard. These settings are not perfect, because if the recipient sets a left margin at, say, 5, the text takes on a ragged look—but zero and 65 are preferable to sending indented text or text that extends too far to the right side of the page.

Finally, check your word processor's manual to see what it says about producing a pure ASCII text file. Often this can be done by printing to disk. Many word processors store text in a compressed format containing nontext characters. These are invisible when you're using the program, but if you upload such a file, your correspondent will see them, and they may come across as garbage.

FILE-TRANSFER PROTOCOLS

Letters, price lists, reports, invoices, and other text files will make up the bulk of your file transfers. But every now and then, you may have to deal with a machine-language or

binary file. Broadly speaking, a binary file is a file that contains non-text, or nondisplayable, characters. Examples include program files, which are binary (as opposed to ASCII), such as those ending in .COM or .EXE, or BASIC programs; word-processing or spreadsheet files that have not been printed to disk; and all graphic image files. To see what a machine-language file looks like, key in TYPE COMMAND.COM at an MS-DOS prompt.

Uploading and downloading machine-language files require a special technique called a file-transfer protocol. The protocol makes sure that any errors in the transmission, such as those due to noisy phone lines, are corrected as they occur. For accuracy, many people use file-transfer protocols even for pure text files when the phone connection is bad or when the files contain crucial numbers and tables.

Since they sound so technical and strange, confronting file-transfer protocols can be more than a little unsettling. Fortunately, once you initiate a protocol transfer, the software takes over and does all the work. Thus, there are really only two things you need to know:

First, the protocols used by sender and receiver must match.

Second, while the venerable *XMODEM* protocol is clearly the lowest common denominator supported by most commercial systems (but not MCI Mail) and communications software support, it wasn't designed for talking to a commercial on-line system (it was designed for smaller bulletin-board systems). Consequently, it should probably be your last resort. The one exception is General Electric's GENie system, which implements *XMODEM* in a special, high-performance way. But even GENie now offers other alternatives.

For a variety of reasons, the most efficient protocol to use on CompuServe is Quick B, followed by its standard B protocol and Kermit. If your software doesn't support these, see if it offers relaxed *XMODEM* and use that. If you want to send a machine-language file on MCI Mail, both you and your correspondent must use Lotus *Express* (for MS-DOS) or *Desktop Express* (for Macintosh). Without this software, MCI Mail is strictly a place to exchange text messages. If you use a service other than MCI Mail or CompuServe, make a list of the protocols your software supports and call the appropriate customer-service number for advice.

A GENTLE ART

The gentle art of computer file transfer is often the fastest, cheapest way of moving information from point A to point B. Customers and clients appreciate that today. Tomorrow, they will demand it. So it's worth your while to learn the technique. ■

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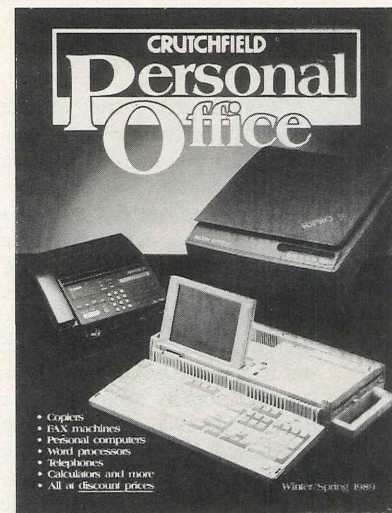
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Accepting Credit Cards from Your Customers

BY PAUL & SARAH EDWARDS



If you've tried to obtain merchant status from a bank so you can accept MasterCard or Visa as payment for your goods or services, chances are overwhelming that you've been turned down. (American Express is not as choosy, and does offer merchant status to home businesses.) And if you've tried more than one bank, you've undoubtedly been rejected repeatedly. Banks routinely deny merchant status to home-based businesses, although small banks are a better bet than big banks.

Why? One reason is that some unethical home-based merchants fail to ship merchandise people order, send defective products, or process the same transactions for goods or services several times. Because of the delay between when a merchant's account is credited and when a shortchanged customer complains, banks suffer losses when unscrupulous merchants take the money and run.

Such fraudulent activities are often associated with telemarketing and mail-order outfits—two businesses that don't require a storefront. As a result, before granting merchant status, banks now look for an indication that a business is stable, such as a storefront or office in a commercial building. So, if you operate your business from home, you're automatically disqualified. Even profitable home businesses with good credit are often rejected.

This predicament has created an opportunity for companies other than banks to play an intermediary role in helping home businesses qualify for merchant status with Visa and MasterCard. Here are three such firms:

- Interstate Financial Services, Inc., P.O. Box 3744, Manhattan Beach, CA 90266; (213) 371-5615.
- United Merchants Services, 1353 Wildwood Drive, Los Angeles, CA 90041; (213) 257-1818.
- Credit Flow, 3216 North Third Street, Phoenix, AZ 85012; (602) 265-8040 ext. 146.

PAUL & SARAH EDWARDS are the authors of *Working from Home, Everything You Need to Know to Live and Work Under One Roof* (Jeremy P. Tarcher, 1987), and the audiobook *How to Succeed at Working From Home* (TDM/McGraw-Hill). They cohost "The Home-Office Show" on Business Radio Network.

These intermediary companies require you to lease (about \$30 a month) or purchase (\$500 to \$800) an electronic terminal to process your credit-card charges. (Credit Flow recently started allowing its customers to clear transactions with a computer and modem.) Merchants who use these terminals report that they save considerable time processing charge-card sales. For example, our local pharmacy spends 10 minutes a day processing charges—it used to take 45.

The 80/20 Rule. Have you noticed that the more successful your business venture becomes, the more you have to contend with? We've found that success brings more of everything—more income, more opportunity, but also more phone calls, more paperwork, more deadlines, more meetings, more hassles.

Identify the 20 percent of things that provide you with 80 percent of your pleasure and profits—and do those things 80 percent of the time!

We've found a guiding principle that enables us to survive the sweet excesses of achievement. It's called the Pareto Principle, after its originator, Vilfredo Pareto. Pareto was a 19th-century economist and sociologist who found that a small proportion of any activity produces the majority of the results. When you apply this principle, also known as the 80/20 Rule, to your life, you can get more done with less effort.

Think about this principle at work in your life: Chances are you wear 20 percent of your clothes 80 percent of the time. In reading newspapers, you probably spend 80 percent of the time reading 20 percent of the paper. It's most likely that 20 percent of the people in your life create 80 percent of your problems; and 20 percent of your calls, letters, or projects produce 80 percent of your results.

So here's our secret to sanity: Two years ago we "80/20'd" our lives. We asked our-

selves: Which of our efforts provide us with 80 percent of our desired results? Which activities produce 80 percent of the profits? What gives us 80 percent of our pleasure? Slowly, piece by piece, we eliminated many of the unrewarding hassles and trivia that used to fill our lives. We held a garage sale and sold almost one-third of our possessions. We cleared out our overstuffed file cabinets. We reorganized our business, dropping certain activities and expanding others. We began spending time with the people who encourage, support, and nurture us.

We truly began to put first things first in our lives, and in doing so we get more done in the same amount of time and enjoy it more. Put Pareto to work in your life. Identify the 20 percent of things that provide you with 80 percent of your pleasure and profits—and do those things 80 percent of the time!

Save Time Using a Laser Printer. We've found that our laser printer improves productivity as much as our first computer did. Besides being deliciously quiet and making the most pedestrian printouts look stunning, it makes many other printers seem as slow as molasses. More than once our laser printer has allowed us to put the extra measure of quality into a proposal or report because we knew that even if we weren't ready to print until 3 a.m., the printer would swiftly produce as many copies as we needed. This contrasts sharply with the 18 hours it took a daisy-wheel printer to put out our manuscript of *Working from Home* years ago.

The only problem with our trusty laser printer has been the time it takes to download soft fonts from a disk to the printer. But now you can do that automatically with a resident program for MS-DOS computers called *BackLoader* (\$30; Roxolid Corp., 3345 Vincent Rd., Pleasant Hill, CA 94523). *BackLoader* works in the background while you do other things. It works with Hewlett-Packard LaserJet printers or compatibles. It's pop-up screen lets you know what's loaded at any point and allows you a remarkable amount of control; you can suspend downloading, resume downloading, resend fonts (if your printer was turned off for some reason), add fonts, sort fonts, and more.

Minor Regrets. The only problem with working at home all the time is that you won't find out how good it is to get home from work. ■

Now Links with Tax Software

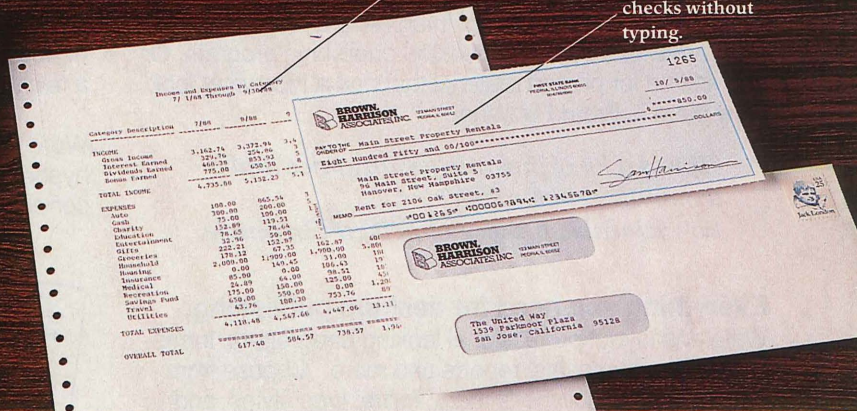
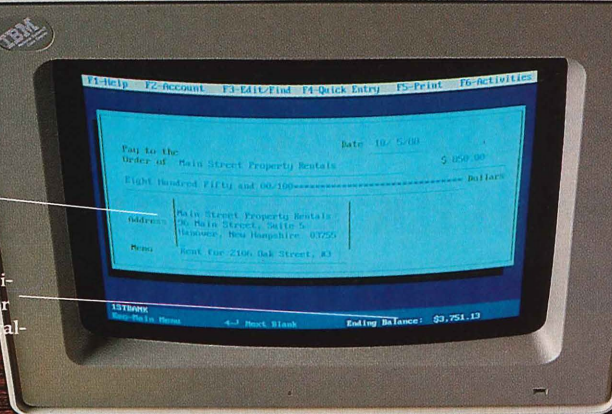
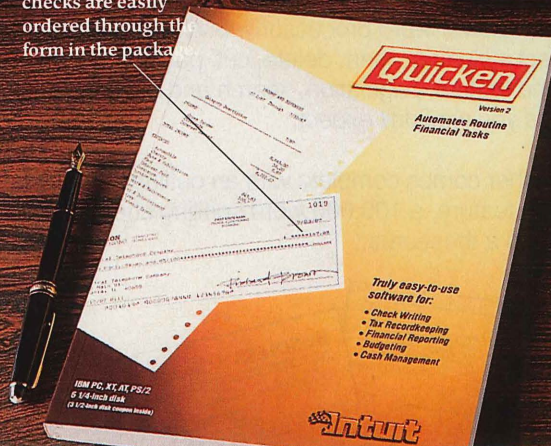
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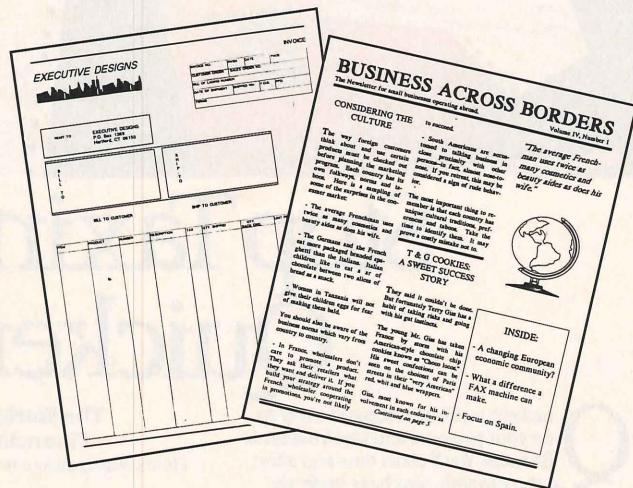
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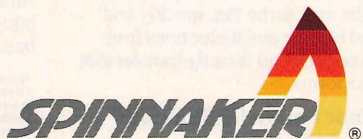
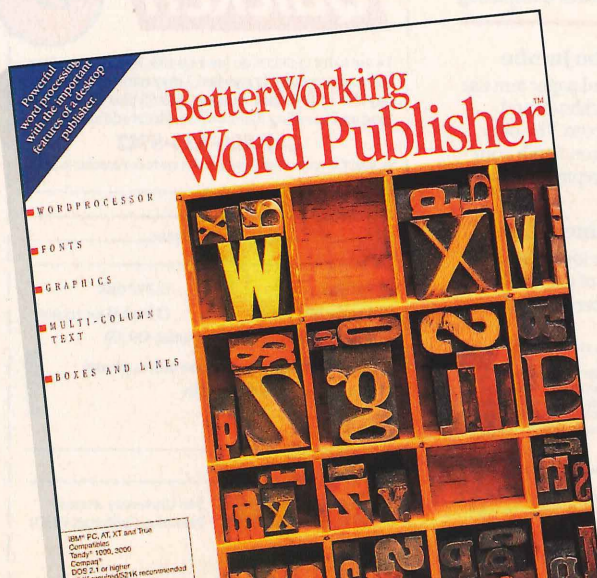


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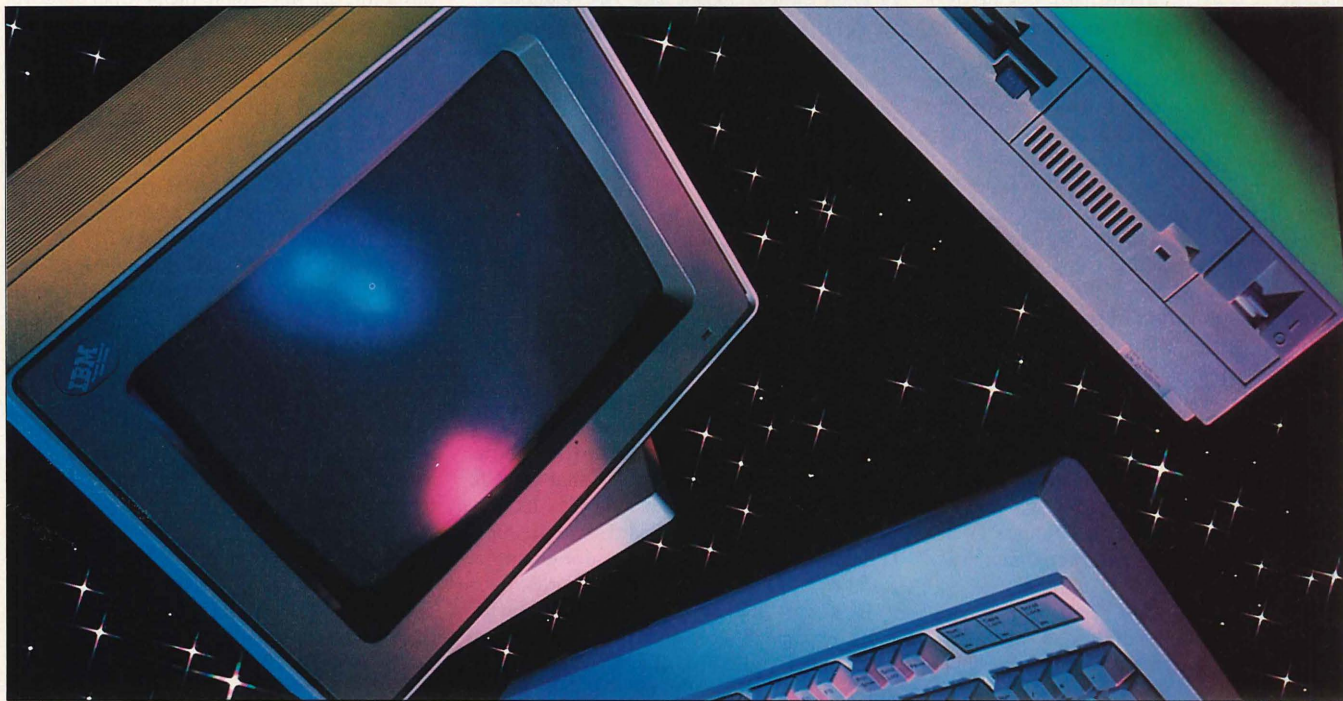
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286 Computers

BUYER'S GUIDE

Answers to Common Questions about 286s,
Shopping Chart with Specifications on 23 Popular Models,
and Reviews of Five New Computers

BY HENRY F. BEECHHOLD



Most of the excitement in the computer industry these days is sparked by 386 computers (those based on the 80386 microprocessor), or so it would appear from the amount of advertising space and trade show talk devoted to these machines. But for the best performance per dollar, your wisest choice in a start-up or upgrade computer may be a 286 machine (based on the 80286 microprocessor).

The 286 computer (also known as an AT compatible) is certainly not new. The first was the IBM PC AT, introduced in 1985. But since the 286 has been superseded by newer technology, its cost has dropped, making 286 computers no more expensive than XT computers (based on the 8088 or 8086

microprocessor) a year ago.

And today's 286 is a far cry from the first AT. It's much faster: Speed has increased from 6MHz to as much as 20MHz. Its hard-disk drives are much larger, with 40MB drives now standard. And displays have been significantly improved; most have either VGA monochrome or color.

Because 286 machines are powerful, standardized, and reliable, and because they are priced to move, industry analysts predict that 286s will constitute the majority of corporate microcomputer purchases in 1989. That should hold true for home-business purchases as well.

With that in mind, we present answers to some common questions about 286 machines, along with a chart listing 23 popular models, and reviews of several new entries. Many of the machines in the chart have been reviewed in earlier issues, notably in the

November 1988 "Buyer's Guide to Computers."

Q: What's the main difference between a 286 computer and a 386 computer?

A: Speed. The 386 computer is, on average, two to three times faster than a 286. Given a 386 and a 286 with the same microprocessor clock speed (say, 16 MHz), the 386 will perform more efficiently because it handles data in 32-bit chunks instead of 16-bit chunks. However, it is possible that a super-fast 286 could be as fast as or faster than a slow 386.

In addition, 386 systems are more efficient for multitasking (running two or more programs at once), which can be done using the OS/2 operating system.

In general, one manufacturer's 386 system will cost about \$1,500 more than its comparable equipped 286 system.

HENRY BEECHHOLD is a contributing editor for HOME-OFFICE COMPUTING.

Q: What is a 386 computer best suited for?

A: Besides the multitasking already mentioned, 386 computers are ideal for any application that involves graphics, such as CAD (computer aided design) or serious desktop publishing. Thus, if you wish to use OS/2 with Presentation Manager, the new graphical interface from IBM that uses on-screen icons, a 20MHz 386 machine would make sense.

But for everyday small-business applications—text processing, database management, accounting, and the like—you can meet your needs now and for a long time to come with a 12MHz 80286 computer.

Q: What's the standard configuration for a 286 machine?

A: The basic configuration as we see it: 640K or 1MB of RAM, (depending on how the machine is sold), a 40MB hard-disk drive, a parallel port, a serial port, either a VGA monochrome or VGA color monitor, and MS-DOS. Not all manufacturers offer the same type of equipment, but we have tried to make entries in the accompanying chart consistent for comparison purposes.

When it comes to speed, the faster the better. A zero-wait-state (see next question) 12MHz 80286 computer is a formidable machine; a 20MHz machine is awesome.

Q: What's a wait state and why is it important?

A: Since a high-speed microprocessor (12MHz or greater) can outrun other parts of the computer, the microprocessor has to be periodically put on hold while the memory chips play catch-up. In a zero-wait-state computer, the microprocessor does not have to wait for data to move through memory (RAM). In a one-wait-state computer it does. However, for all but the most complex tasks, the effect of wait states is minimal.

Of course, disk drives and printers slow things down significantly and all microprocessors have to idle while these peripherals do their jobs.

Q: What is a suggested list price?

A: Suggested list price is the price at which the manufacturer suggests the retailer sell a product. As with other consumer products, list price should be used as a reference point, but you can almost always find the product sold for less. Depending on the type of store and the nature of the product, discounts can be more than 35 percent off the list price. For instance, Zenith computers, which are aimed primarily at businesses and sold through computer specialty stores, are less heavily discounted than, say, Vendex computers, which are aimed at consumers and sold through mass-market outlets.

For the purpose of comparison shopping, take 25 percent off the suggested list price in the accompanying chart. One exception is the Dell 220, sold by a direct-sales firm that doesn't offer discounts. However, the list price does include regular ground shipping.

Q: Within a given price range, are all 286s of the same quality?

A: The following reviews describe the performance and quality of selected brand-name 286 machines. Broadly speaking, equivalently priced machines made by reputable manufacturers are approximately equal in quality, and though they may have some slightly different characteristics, they'll all do the job. More significant differences will be found in the selection and quality of supplied software, documentation, and customer support.

The best customer service packages offer (1) a no-hassle 30-day return option, (2) a parts-and-labor warranty of one year (or more), redeemable through a local or regional service center, and (3) technical support via a toll-free telephone number.

Q: What software comes with 286 computers?

A: Your new 286 machine should come with a current version of MS-DOS—that is, version 3.2 or higher. Also, there should be proprietary software for setting up the computer and performing diagnostic tests. Where video cards are provided, there will be video utilities and software drivers. If your computer comes with applications software for such tasks as designing spreadsheets or word processing, you can start working right away.

Q: Why are some 286 computers so much bigger than others?

A: The general trend in computer design is toward small-footprint computers that take up less desk space. That's possible now, since so many of the "ports" that used to come in the form of expansion cards are now built onto the system board. Parallel and serial ports, and video display, for example, don't necessarily require add-on cards.

However, the larger computers provide more expansion slots and allow for inboard mounting of more disk drives than the smaller ones. If you expect to be adding a number of expansion cards beyond the basics (such as a fax board or a network interface), and want room for a second hard drive, second floppy, and backup tape drive, then you'll need one of the larger units.

Q: Will the software I use on my PC or XT work with a new 286 computer?

A: Yes, virtually all PC and XT software will run on both 286 and 386 machines—and run much faster. Today, very few software products actually require a 286 machine (*Excel* and *PageMaker* being two notable exceptions) or a 386 machine.

Q: Do 286 computers run IBM's new operating system, OS/2?

A: Yes. But keep in mind that OS/2 itself occupies a half megabyte of RAM and needs about 1.5MB to work well. Your application program(s) also require memory, so you need close to 3MB to comfortably use OS/2.

Q: What does DOS Version 4.01 offer 286 users?

A: The new upgraded DOS versions (4 and 4.01) run on all MS-DOS machines. DOS 4.01 provides a friendly DOS shell, similar to that of OS/2, and can be used with a mouse. It also can handle hard-disk drives larger than 32MB; previous versions of DOS had to break larger drives into separate partitions.

Q: Why are so many 286 computers sold with 1MB of memory if DOS can access only 640K?

A: Memory on a 286 can theoretically go all the way up to 16MB. The OS/2 and XENIX operating systems can use this extended memory, but DOS—and many programs—cannot. Without these operating systems, the extended memory can be used to create a RAM disk, which allows large application programs to run much faster than they do from a disk drive. RAM disks operate at RAM speed and are a delight to use. However, since all contents of a RAM disk vanish when you turn off the computer, you must remember to save your data to a hard disk or a floppy disk before shutdown.

Another kind of memory—expanded memory—allows DOS to address more than 640K. EMS 4.0 (expanded memory specification), also called LIM 4.0 (Lotus-Intel-Microsoft), gives software access to as much as 32MB of RAM. Of course, you need to add several memory cards to accomplish this. In either case, for best results you need a fast-access disk drive (see next question).

You install the special memory-management software provided with these cards (unless you're using DOS 4.01), and from then on you don't have to think about it. Lotus 1-2-3, *Symphony*, and a number of other programs are designed to take advantage of expanded memory, but much software is not. Alternatively, you can create one or more large RAM disks with expanded memory and use them just as if they were real disks.

Q: What's an acceptable hard-disk access speed?

A: The hotshot hard disks run at about 28 milliseconds (ms) or lower. Bargain 286 computers will not be equipped with super-fast drives. Expect, rather, numbers in the 70 to 80 ms range. If you want a truly high-performance 286 system, you'll want all the components to run as fast as possible. This means the fastest possible microprocessor, operating at zero wait state, and the fastest possible disk drive.

In testing drives, we've noticed that it's not unusual for high-speed disk drives to have a higher proportion of unusable spots (sectors or clusters) than the slower drives. This is not inevitable, but don't be surprised if your blazer is missing 20K or so of storage space.

Q: How do I add memory to a 286?

A: All computers are advertised as coming

with a given amount of memory on the main board (usually 512K, 640K, or 1MB). This means that the memory is installed on the main system board (motherboard). Generally, these computers are also advertised as "expandable on the main board" to some value in megabytes, say, 4MB. This means that you can buy additional memory chips or Single Inline Memory Modules (SIMMs) to plug into open sockets on the motherboard.

You're not limited, however, to memory expansion on the main board. All 286 computers can address up to 16MB of RAM (when using the right operating system). In order to add memory beyond the available

sockets on the motherboard, you have to buy special memory boards, which plug into standard motherboard expansion slots. So, if you're anxious to pile multimegabytes of memory into your new computer and plan as well to add a modem and other expansion boards, be sure to buy a computer with enough open expansion slots to handle your needs.

Q. Are there any developments on the horizon that should affect my current purchase decision?

A. Yes, but it will be some time before they materialize. Computers with the 80486 mi-

croprocessor will be out before long, and a new crop of computers will follow soon thereafter. But remember that there's very little software written specifically for 386 computers, and probably won't be more until the early 1990s, so there's no point in looking beyond that.

The real question is what you should do now, given the tension between budgetary limitations and computing requirements. Should you leapfrog over 286 and go directly to 386, or save money and invest in a 286? There's no inarguable answer to this question, except that few people will go wrong with a 286.

GUIDE TO 286 COMPUTERS

Choosing among computer systems can be an arduous task—especially since what's standard for one computer is optional for another. Often, these optional features are as important to the computer system as a steering wheel is to a car. Be aware of the temptation to purchase the lowest-priced model.

For the purpose of this chart, we've put together a standard system, which should be able to satisfy the demands of most home business users. The basic system consists of at least 512K of memory (RAM), a keyboard, a 1.2MB 5.25-inch floppy-disk drive (except where noted), a 40MB hard-disk drive with an access speed of 40 milliseconds (ms) or lower, VGA port (either built in or on a card), a parallel port (P), a serial port (S), and DOS. The system's suggested list price also includes a VGA monochrome or a VGA color monitor.

When the manufacturer's standard configuration does not include these basic system requirements, we add the cost of the missing components to the

system list price. For example, if DOS isn't included, the system list price in the chart includes the cost of the DOS. Our chart also lists extra components, such as a second serial port (2 S) or a mouse/pointing device port (M), that come standard with a system.

In some cases, the missing component simply isn't available. (For example, some systems are available only with 20MB or 32MB hard-disk drives.) In the chart, 6 out of 24 models offer only EGA, not VGA, and all support Hercules graphics. VGA capability can be added to a system, but only from another manufacturer. The EGA system includes a standard (TTL) monochrome monitor or a EGA color monitor.

All the models in the chart have at least three free expansion slots, enough for your basic expansion needs. Four types of expansion slots are listed in the chart: 8/16-bit (AT); 8-bit (PC); MicroChannel Architecture (MCA); and 16-bit proprietary slot (16P).

Company/Model	System Suggested List Price Mono/Color	Standard/System Memory ¹	Floppy-Disk Drives	Hard-Disk Drive Capacity/Access Speed	Ports	Available Expansion Slots	Micro-processor Speed (MHz)	Wait State (Cycles)	Warranty (Months)	Additional Software Included
Acer 915	\$2,593 / \$3,043	512K/1MB	1	40MB/28 ms	P, S, eEGA	4 AT	12.5	1	12	None
Amdek 286A	\$3,989 / \$4,339	1MB/1MB	1	40MB/28 ms	P, 2 S, VGA	3 AT, 1 PC	12.5	0	12	None
American Mitac Paragon 286V	\$3,055 / \$3,394	1MB/8MB	1	40MB/29 ms	P, 2 S, VGA	5 AT, 1 PC	12	0	12	None
AST Premium/286 140V	\$4,290 / \$4,790	1MB/2MB	1	40MB/28 ms	P, S, VGA	3 AT, 1 PC	10	0	12	None
Compaq Deskpro 286 Model 40	\$5,173 / \$5,617	640K/2.1MB	1	40MB/30 ms	P, S, VGA	5 AT, 1 PC	12	1	12	None
Dell System 200	\$2,799 / \$3,099	640K/4.6MB	1	40MB/28 ms	P, 2 S, VGA	3 AT, 1 PC	12.5	1	12	None
Dell System 220	\$3,099 / \$3,399	1MB/8MB	1 ²	40MB/29 ms	P, 2 S, VGA	3 AT	20	1	12	None
Epson Equity II+	\$3,447 / \$3,897	640K/640K	1	40MB/28 ms	P, S, eEGA	3 AT, 1 PC	12	0	12	None
Epson Equity III+	\$3,747 / \$4,197	640K/640K	1	40MB/28 ms	P, S, eEGA	7 AT	12	0	12	None
Hyundai Super-286c	\$2,405 / \$2,865	640K/1MB	1	40MB/39 ms	P, 2 S, eEGA	4 AT, 2 PC	10	1	18	None
IBM PS/2 Model 30 286-E01	\$2,990 / \$3,465	640K/4MB	1 ²	20MB/80 ms	M, P, S, VGA	3 AT	10	1	12	None
IBM PS/2 Model 50Z-031	\$4,390 / \$4,865	1MB/2MB	1 ²	30MB/39 ms	M, P, S, VGA	3 MCA	10	0	12	None
IBM PS/2 Model 60-041	\$5,690 / \$6,165	1MB/1MB	1 ²	44MB/40 ms	M, P, S, VGA	7 MCA	10	1	12	None
Kaypro PC/286	\$3,295 / na	1MB/8MB	1	40MB/27 ms	P, S, eEGA	2 AT, 3 PC	12	1	12	Microsoft Works
Kaypro 286 Model 10/20	\$3,915 / na	1MB/8MB	1	40MB/27 ms	P, S, eEGA	3 AT, 3 PC	16	1	12	Microsoft Works
Leading Edge Model D2	\$2,595 / \$3,090	512K/1MB	1	65MB/28 ms	P, S, VGA	2 AT, 2 PC	12	1	20	Leading Edge Wordprocessor
Mitsubishi mp 286-342V	na / \$4,195	640K/640K	1	40MB/28 ms	P, S, VGA	5 AT	12	1	12	None
NEC PowerMate I Plus	na / \$5,040	640K/640K	1	42MB/28 ms	P, S, VGA	4 AT, 1 PC	12	0	12	None
Tandy 3000 NL	\$3,668 / \$4,097	640K/640K	1 ²	40MB/28 ms	P, S, VGA	3 AT, 2 PC, 16P	10	1	12	None
Tandon Targa-40 Plus	\$3,847 / \$4,297	1MB/1MB	1	40MB/40 ms	P, S, EGA	3 AT	10	1	12	None
Vendex HeadStart III	\$3,244 / \$3,690	1MB/3MB	2 ³	32MB/28 ms	M, P, 2 S, VGA	3 AT	12	1	36	See Note 4
Zenith 248/12 Model 40	\$5,098 / \$5,498	1MB/6MB	1 ²	40MB/28 ms	M, P, S, VGA	4 AT	12	0	12	MS Windows
Zenith Z-286 LP	\$4,298 / \$4,698	1MB/6MB	1 ²	40MB/28 ms	P, 2 S, VGA	2 AT	8	0	12	MS Windows

FOOTNOTES: ¹Memory that comes with the basic system and the maximum amount of memory that can be added without using an expansion slot; ²1.44MB 3.5-inch floppy-disk drive; ³Both 1.2MB 5.25-inch and 1.44MB 3.5-inch floppy-disk drives are included; ⁴Additional software includes *Framework II*, *Logitech Paintshow*, *ATI Tutorial*, *Computerease*, *Publish It!*, *Bookmark Plus*, *Xtree*, *3D Perspectives*, *Splash!*, *Friendlink Telecom Software*, and *Chessmaster! 2000*; na = not available.

MANUFACTURERS

Acer Technologies (408) 922-0333; Amdek Corp. (800) 722-6335; American Mitac Corp. (800) 648-2287; AST Research, Inc. (714) 863-1333; Compaq Computer Corp. (713) 370-0670;

Dell Computer Corp. (800) 426-5150; Epson America, Inc. (800) 922-8911; Hyundai Electronics America (408) 473-9200; IBM Corp. (800) 426-2468; Kaypro Corp. (800) 452-9776; Leading Edge Hardware Products, Inc. (800) 872-5323; Mitsubishi Electronics America, Inc.

(213) 515-3993; NEC Information Systems, Inc. (508) 264-8000; Tandon Corp. (800) 556-1234 ext. 171, (800) 441-2345 ext. 171 in California; Tandy Corp. (817) 390-3011; Vendex Technologies, Inc. (800) 722-6224; Zenith Data Systems (800) 842-9000

Reviews of Five New 286 Computers

Here are reviews of five 80286 computers. For more details, as well as descriptions of 18 others, refer to the accompanying chart.

Ratings Key: ○ Poor; ★ Average; ★★ Good; ★★★ Very good; ★★★★ Excellent.

Acer 915

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$3,043

Acer Technologies is the American marketing division of a Taiwanese firm that has been in the high-tech business since 1976. Acer computers appeared in force on the American market in 1985, and the company has quickly built an impressive reputation. The Acer 915 offers good performance in one of the smallest, neatest packages around. There's not a lot of room for expansion, but there's probably enough to suit most users.

The computer is fast (12MHz) and quiet. The hard-disk drive runs at a good clip (28ms). The Paradise PEGA2 card—an EGA display adapter compatible with CGA,

MDA, and HGA (Hercules monochrome graphics) standards—is certainly acceptable, though VGA is the level of display quality to which we are rapidly growing accustomed. The card does provide a super-EGA mode (640-by-480, 16-color), and comes with drivers for such programs as *GEM*, *Microsoft Windows*, and *AutoCad*.

The AT type of keyboard has a soft touch, but a pleasant clicky quality. It falls just short of the IBM feel. To access the interior of the system you need only remove two screws and slide the cover forward and off. The four available expansion slots are mounted at right angles to the system board, requiring horizontal insertion of cards, the same arrangement IBM uses in its PS/2 computers.

The Acer 915 user's guide explains clearly how to turn the cold computer into a working piece of equipment. The MS-DOS and GW-BASIC manuals are Microsoft's own. If you're new to DOS and/or BASIC, I'd recommend buying a user-friendly book on each from your local bookstore.

In addition to the warranty service provided by Acer and TRW (an on-site service network), telephone support is available for technical problems.



Amdek System/286 A

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$4,339

Amdek started out as a distributor of video monitors. The company is still very active in the monitor business, and has expanded into computer systems design and distribution. Along the way, Amdek merged with Wyse Technology, another video terminal manufacturer. So while Amdek is new to computer-systems, it's a well-established company.

The System/286 A is a high-performance computer with some interesting and original touches, packaged in a compact enclosure that leaves you a generous amount of desk space. The front-panel CPU speed control allows you to switch operating speed on the fly, although you'll probably never want to do this. Once you've grown used to high-speed processing (12.5MHz), you'll not be anxious to drop back to 8MHz.

The backlit front-panel display gives the computer an extra-high-tech look and provides useful, if not absolutely necessary, information such as the current time, the operating speed (8 or 12.5MHz), and performance. The latter is shown through a display meter similar to those found in hi-fi and video equipment to indicate the relative performance of the system. The shorter the line, the slower the speed, with the most dramatic drop-offs coming, predictably, during disk accesses.

Hard-disk accesses are fast but noisy, emitting a curious deep growl. At shutdown, this noise sounds downright unhealthy. Nevertheless, I had no failures of any kind. Each brand of disk drive seems to have its own distinctive voice.

If you install the supplied video utility



called *FASTBIOS*, the computer's speed should please all but the most compulsive speed addicts. *FASTBIOS* writes video information to RAM and causes the screen to be rewritten as fast as the computer can operate. The Amdek VGA video card and the Amdek VGA monitor make a good team.

The touch of the keyboard is a bit stiff but indeterminate—sort of stiff/mushy. I prefer a clicky feel, a definite sense of contact as a key hits bottom.

The Amdek System/286 is a well-made computer housed in an all-metal enclosure with an unusual internal layout. Instead of a system board lining the bottom of the enclosure as in most computers of this type, there is a "backplane" (consisting mainly of expansion slots and a few support chips) and a CPU card—with a piggybacked "daughter" card containing the system memory—plugged into the 16-bit expansion slot closest to the outer edge of the backplane. The big advantage afforded by this arrangement is the easy upgrade to a 386. It's also easier and cheaper to send the boards for servicing than the entire computer.

The manuals—two stapled, one wire-bound—are slim, but include enough information to get you started. Illustrations are plentiful and clear. There is no manual for BASIC—even though BASIC is supplied in the software bundle—and the MS-DOS manual is only an entry-level introduction. For the complete MS-DOS 3.2 reference manual, you are asked to contact the Amdek dealer. What's the logic of this? Surely the buyer is entitled to the whole book right up front.

Support consists of the industry-standard limited warranty, covering parts and labor for one year. Service is handled primarily through the local dealer, but you can get an authorization to return the unit to the factory.

IBM PS/2 Model 30 286

RATING: ★ ★

SUGGESTED RETAIL PRICE: \$3,465

While denying it, IBM has stepped back—rather far back—into the AT world with this unexciting 286. Yes, the Model 30 286 has the VGA graphics and the PS/2 design the original Model 30 lacked, but it's just a so-so AT. Although DOS 4.01 lends the computer an air of up-to-dateness, IBM has no cause to be proud of the Model 30 286 in this competitive market.

The 10MHz, one-wait-state CPU is far from a speed demon. The 20MB disk drive, almost noiseless, even during accesses, is also slow, with a plodding 80 milliseconds access speed. Because virtually all of the new 286 computers are coming through with 32MB (or larger) drives rated at 28 ms,



IBM's low-capacity, low-speed drive seems old-fashioned indeed.

The video quality is exactly the same as that provided with the high-end PS/2 machines—standard IBM VGA with its enviable clear, bright colors and fine detail. The video tutorial supplied on the Starter Diskette does a good job of showing off the colors and shadings available. A Model 8513 VGA monitor (12-inch, \$750) was supplied with the test computer. I'd recommend this finer grained one over the slightly coarser and less expensive Model 8512 (14-inch, \$595)—es-

pecially if you plan to do a lot of text processing.

The quality of workmanship is typical IBM—good throughout, with no evidence of corner cutting. If this were the principal measure, one would be led to assume that this finely crafted machine will give years of reliable service.

The keyboard, of course, is what a keyboard should be. IBM may stumble here and there, but not when it comes to building a keyboard. It's hard to see how touch and response could be improved.

For the most part, IBM documentation is about as good as it gets in the microcomputer industry. All of the manuals are clearly written and illustrated. There are few questions that you won't find answered somewhere in the stacks of printed material supplied. The slim *Guide to Operations* (along with the Starter Diskette) is all you need to get the computer going. Once you're satisfied that the computer really works, you can explore DOS with *Getting Started with Disk Operating System 4.00* (it's actually 4.01), a fairly extensive overview. *Using Disk Operating System 4.00* is a standard DOS reference manual, rendered in IBM style.

The warranty is handled through IBM dealers, from whom you can probably get all the start-up help you'll need.

Tandy 3000 NL

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$4,097

The Tandy 3000 NL is a well-made, but unexciting 286 computer that offers the buyer a big plus in customer service, for there are Radio Shack/Tandy business computer centers strategically placed around the country.

As part of the otherwise standard setup procedure, the hard disk can be prepared for use with a nifty program supplied with Tandy DOS 3.3. AUTOFMT (automatic format)

takes care of formatting and DOS system transfer. When this task is done, your computer will henceforth boot from the hard disk.

If you buy the computer with a hard-disk drive, memory upgrade, and VGA card installed, you'll save yourself an hour or so of tinkering. But if you buy a stripped computer (at the fairly low base price) and shop around for add-ons, then the time and effort for setting up the computer will be considerably greater. You'll probably be able to save mon-



ey with a non-Tandy video card and hard-disk drive. On the other hand, an all-Tandy system will be fully supported by the company.

The hard disk came with no bad clusters and ran at 28 ms average access time. The disk motor is quiet, and the accesses are only slightly less so. At shutdown, however, the disk lets you know it's there by giving out a kind of ratcheting growl that gradually fades to silence. The 10MHz CPU is not blazingly fast in this day and age.

The Tandy VGA video adapter output (tested with a Tandy VGM-300 analog color monitor) is up to snuff. The card supports all the standard video modes—CGA, EGA, VGA, MDA, and Hercules monochrome graphics.

While the Tandy keyboard lacks the special IBM feel, it is acceptable to IBM keyboard fanciers like myself. My major complaint is that the touch is a tad soft—slightly stiffer springs would be better.

The enclosure is made of metal with a plastic front panel, several sections of which can be knocked out to accommodate three additional drives. The power pushbutton includes an LED in the button itself. The reset button is recessed in the front panel to prevent inadvertent resets.

The manuals all match in design and typography, and even the Microsoft materials (the hefty DOS and GW-BASIC manuals) are customized to conform to Tandy's standards. Nevertheless, for a clear explanation of many of the fine points of BASIC and DOS, you should buy a couple of specialized guides from your local bookstore.

The warranty is nothing special—just the usual one-year parts and labor. But the 6/60 Plan, which costs \$60 and entitles you to help resolving six "incidents," could be helpful. An incident could be just a one-shot problem or one that requires several sessions at the service center. There is no time limit on this support plan.

286 COMPUTERS REVIEWED IN PREVIOUS ISSUES

IBM PS/2 Model 50	June 1988
Arche Rival 286	
Mitac Paragon 286	July 1988
AST Premium Workstation 286 Model 243	October 1988
AST Premium/286 Model 140	November 1988
Dell Computer System 220	
Epson Equity III + Kaypro 286-40	
Leading Edge Model D2	
NEC PowerMate I Plus	
Zenith Z-286 LP Model 40	
Hyundai Super-286c	December 1988



Zenith Z-248/12 Model 40

RATING: ★ ★

SUGGESTED RETAIL PRICE: \$5,498

Zenith, the only remaining American television manufacturer, offered one of the first (and by far the best-selling) computer kits. The years of experience in consumer electronics and microcomputer system design and manufacturing give Zenith a big edge in the marketplace. Many of the microcomputers used by the United States military carry the Zenith logo. One must, therefore, put Zenith high on the list of serious contenders for your computer dollar.

The Z-248 comes with a fine pedigree, but does it live up to its reputation? In two words: Yes, but . . . What we have here is a solid piece of equipment, designed to bear up under heavy use, and to be easily adapted to changing needs. It is, however, neither the fastest in its class nor the most competitively priced.

The hard-disk drive runs at a 28 ms access time, and our test drive had no bad sectors. The CPU clock speed is a fast 12MHz, but the zero-wait-state operation makes it seem much faster. Bootup takes only a couple of seconds, achieved with Zenith's *Slushware*—the transfer of the bootup routine from ROM (system board firmware) to RAM. Thus, everything happens at CPU speed. This is a big plus as far as I'm concerned, because I get impatient with the leisurely bootup procedures characteristic of many computers.

The hard-disk drive motor is loud enough to mask the sound of the power-supply fan.

In a dead silent room, the computer is a definite presence. In the normal hubbub of a small office, it won't stand out. The keyboard is up to Zenith's admirable standards: It's solidly built and provides just about the right amount of crisp, tactile feedback.

The Zenith 31KHz Video Card (Z-449) is, unfortunately, one of the least impressive of all VGA display adapters. Colors are on the dull side and characters lack the sharpness of those produced by other name-brand VGA cards. The Z-449 is a standard VGA with both digital (9-pin) and analog (15-pin) interface connectors, is compatible with all video modes up to VGA, and will drive nearly any monitor. The Z-449 is certainly an acceptable piece of equipment, but would not be my first choice in display cards. This is ironic, because Zenith urges buyers of their spectacular flat-screen video monitor to use it with the Z-449, which fails to do justice to the monitor.

All of the manuals are Zenith's own, even the Microsoft *Windows* manual. This means that they are customized to conform to the Zenith format, praiseworthy for high-quality line drawings that illustrate concepts clearly. The text is less praiseworthy, often getting bogged down in technical jargon and failing to explain matters on a layperson's level.

Zenith has a coast-to-coast network of retail sales and service centers—important because they partly justify the relatively high price of this computer. The Z-248/12 comes with a one-year limited warranty, telephone technical support, and the extra-cost option of on-site (your office) service and repair. ■

Celebrity Writers Get Around the Block

Top-Flight Authors Shana Alexander, Noel Behn, Jimmy Breslin, Pete Hamill, and Gabriel Garcia Marquez Give Up Their Typewriters for Computers (But Not Without a Fight)

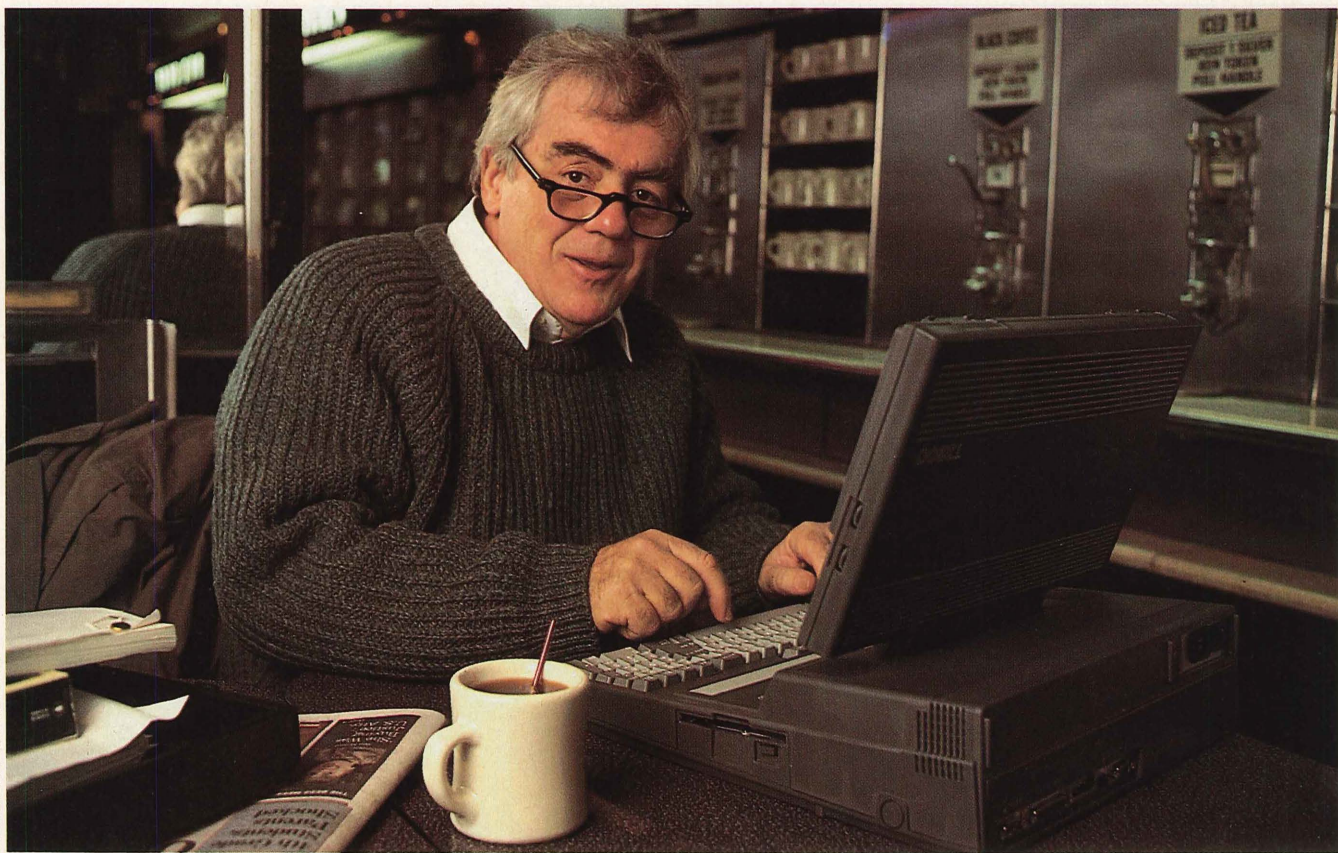
BY TERRY GEORGE

In 1985, an ad for Smith Corona typewriters featured the quintessential New York writer, Jimmy Breslin. The Pulitzer Prize winner (1986) declared, in his usual unambiguous terms, that a Smith Corona was "for people who don't like their words processed." Presumably these people didn't like their food microwaved, their air conditioned, or their fish frozen. Mr. Breslin, after all, is a man of honest tastes.

But one night, not long after the ad stopped running, I got a call from Breslin. "Where can I get a Brooklyn Bridge?" he asked. I paused. Breslin has accused many others of trying to sell the same over the years. "I need it for my Toshiba 3100," he added. Ah, he was talking about the product that transfers files from a laptop to a desktop. The computer age had triumphed over one of its most fervent Luddites.

Around the time of Breslin's conversion, I was hired by the writer Shana Alexander to help her with a momentous project—a book on the massive "Pizza Connection" Mafia trial in New York City. At the time I was

TERRY GEORGE is a feature writer for *Irish Voice* and worked as a reporter on Shana Alexander's *The Pizza Connection: Lawyers, Money, Drugs, Mafia*.



"My working style was electrified out of existence."

Pulitzer Prize-winning Jimmy Breslin gets coffee and story ideas in New York's Horn & Hardart Automat.

doing research for novelist Noel Behn and occasionally helping out journalist and writer Pete Hamill, who now works for the *New York Post*. All these writers held in special veneration the trusty typewriter and the trash basket filled with crumpled pages. They had become leading wordsmiths using these basic tools. Now they had all been advised to computerize. It was, for them and many other seasoned writers, like being asked to forsake the luxury of the great ocean liners and take a seat on a cramped airplane.

THE VENERABLE HERMES

Shana Alexander spent 18 years writing for *Life* magazine (she was the magazine's first woman writer), wrote a column for *Newsweek*, and then became the female half of "Point-Counterpoint," a now-defunct segment of "60 Minutes." She also specialized in non fiction books on great modern courtroom dramas, such as the Patty Hearst and Jean Harris trials. A Hermes typewriter had served her well for many years, until she finally acknowledged the age of electricity by opting for a Smith Corona.

Pete Hamill also pounded the keys of a Hermes. The veteran reporter had served his apprenticeship at the *New York Post*, had become one of their top columnists, and has since written for almost every major magazine in America. He had lugged his Hermes from Saigon to Belfast to Managua. For Ha-

mill there was something satisfyingly physical about slapping the return arm at the end of each line. He could never make the jump to an electric typewriter.

Noel Behn wrote the best-selling spy thriller *The Kremlin Letter* on a battered electric and later used a Hermes to do rewrites of his script for the John Huston movie of the book. He's even lugged a Hermes through Europe. Once he locked himself in a Boston house to type up (on a Smith Corona) his exposé of one of the largest robberies in American history, *Big Stick-up at Brinks*.

All three writers were slow to join the computer revolution. They had made it to the top in a profession that relished the image of the lone writer wringing great words from a primitive machine in Spartan lodgings. The typewriter gave the writer a physical connection with the written page. The page could be crumpled and hurled across the room in disgrace—or rolled off the platen, admired, and touched up with gentle pencil strokes. Suddenly all three were bombarded with advice to buy some sort of writer's Cuisinart.

WRITING IN FLINTSTONE

Shana Alexander made a first brave venture by purchasing an Epson QX-10 (an old CP/M machine) to help her through her best-selling murder story *Nutcracker*. She struggled along with the Epson's now antiquated *Valdocs* software system. "Writing in *Val-*

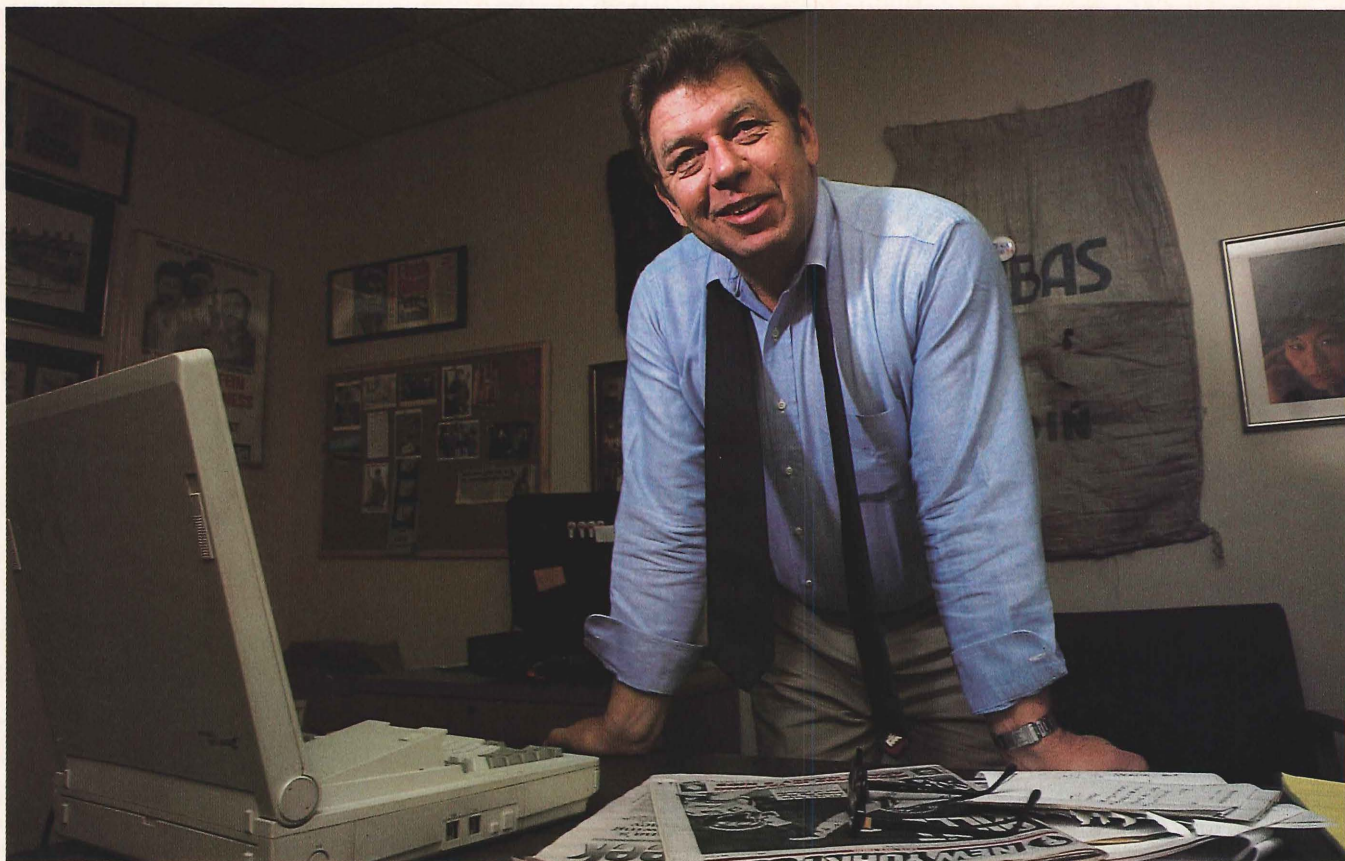
docs was like writing in Flintstone," she remembers. The book consumed some 20 disks and it made #2 on the *New York Times* best-seller list.

Hamill, the man who never used an electric typewriter, was even more reluctant to join the computer age. His first concession to progress was to allow his secretary to retype his work on a Kaypro II.

Behn, in a move befitting a former counterintelligence agent, had his finger on the pulse of the fast-changing market and merely rented a Kaypro II, as if sensing that the machine would eventually become obsolete.

The breaking point for all three authors came because of the sheer volume of work. Alexander had to chronicle the Pizza Connection trial, which had been expected to last six months and went on for 17. Hamill was juggling a major novel, three movie scripts, and a list of overdue magazine articles that kept his phone buzzing all day with deadline threats. Behn had been presented with a mysterious black suitcase of previously undiscovered documents about the Lindbergh kidnapping and had signed a contract to write an exposé.

Any machine these authors would be grudgingly agree to work on would have to be relatively simple, fast, and have a storage capacity large enough to hold TV mini series screenplays or 500-page manuscripts. As their *de facto* computer consultant, I suggest-



"I think the computer is the greatest instrument yet invented for a writer."

Globe-trotting Pete Hamill, shown in his New York Post office, often works with a Zenith 183 laptop.

ed a Leading Edge Model D with a 20MB hard-disk drive. An MS-DOS machine was an automatic choice as these reluctant converts had already been victims of obsolescence and were not prepared to re-educate themselves each time the market hiccuped. Indeed, they were only willing to tackle the rudiments of MS-DOS on a learn-as-you-go basis.

MAN IN A HURRY

Both Hamill and Alexander had to be coaxed into a love affair with their machines. At first, they were uninterested in features. They expected a clean video page to compose on, an efficient cut-and-paste system, and a decent printed page as the end result. Behn, on the other hand, took to the hard disk like a Russian sub to water. His computer was quickly loaded with programs named *Lightning*, *Quicken*, *FastBack*, and *Hot Line*. This was a man in a hurry.

The essential word processor around which each writing system was built was *WordPerfect* 4.1. I recommended it because it started with a blank typewriter-like page (no commands at the top as on many word processors), the basic commands were easy to master, and it was fast becoming a print-industry standard. Publishing companies either worked with it or had converted *WordPerfect* files, and all the major newspapers and magazines were comfortable with it.

WordPerfect also had features that were bound to eventually romance the recalcitrant Hamill and Alexander. He fell for the macro-creation capability, which allowed for perfectly formatted movie screenplays. She became enamored of the Search function.

SEARCHING FOR MOBSTERS

In order to master the complexities of the Pizza Connection conspiracy, she and I created a huge chronology of the movements and contacts made by each Sicilian defendant, and then used the Search function and a macro program to create a macro that would extract any reference to a particular Mafioso and place it automatically at the end of his own file. Thus, we could build up a complete profile of each mobster's movements with a few keystrokes.

Behn also made enormous use of the Search function in chronicling the Lindbergh case. His quest was for "linkage"—the placing together of two previously unrelated suspects.

Despite the joy of a successful search or a perfectly printed dialogue, the writers initially displayed a deep fear of the computer. This fear stemmed partly from a resistance to changing a routine, but more importantly from a dread that the almost perfect paragraph or the Pulitzer Prize-winning story would disappear just at the moment of completion.

LONG ISLAND BROWNOUT

On one occasion I was having a pleasant phone conversation with Shana Alexander when she gave a squeal of anguish followed by the heartrending statement: "It's gone." She had been visited by a Long Island brownout. Fortunately, one of the great features of *WordPerfect* is its backup function, which makes a copy in the event of such power failures or unforced errors. However, the *WordPerfect* backup function cannot cope with a writer's midnight madness, when fatigue produces an unthinkable N in answer to the question SAVE DOCUMENT Y/N?

These three writers differed over choice of printers. Hamill was advised by a friend to get a letter-quality printer. It was much too slow. Behn bought a very fast and expensive letter-quality printer. Alexander opted for a Toshiba 321 24-pin dot-matrix printer, which has both the speed to handle 100-page sections of documents and a good near-letter-quality mode. The Toshiba was by far the best of the bunch.

Alexander, Behn, and Hamill all use their homes as offices. Alexander's beautiful beach house in eastern Long Island is built around the loft office with its spectacular view of a pond. Within cycling distance are other home-office veterans, such as Kurt Vonnegut, E.L. Doctorow, Wilfred Sheed, and Betty Friedan. Alexander has identical Leading Edge systems on Long Island and in



"Writing [with my first computer] was like writing in Flintstone."

Shana Alexander shuttles between her Manhattan apartment (shown here) and her Long Island home office.

her Manhattan apartment, and shuttles back and forth with floppy disks. Her Hayes modem transmitted in minutes draft chapters of *The Pizza Connection* to her publishers, Weidenfeld & Nicolson.

Hamill recently married the Japanese writer Fukiko Aoki. They moved from a cramped Greenwich Village mews studio to a 65-acre farm in the Hudson River valley. With *The Village Voice*, *New York Post*, and sundry magazines constantly clamoring for copy, Hamill uses a 1200-baud modem to speed columns to various editors and was issued a Tandy Model 100 laptop for field assignments and political conventions. But the Tandy didn't allow Hamill, a notorious workaholic, to take large-scale projects such as movie scripts on the road. He bought a Zenith 183 laptop with a hard-disk drive and I configured it exactly like his Leading Edge. When he returns after a field trip, his latest work is dumped into his home-based machine.

WORDPERFECT IN JAPANESE

Hamill's wife, Fukiko, a best-selling novelist in Japan, returned from a visit to her native land with a Toshiba 1200H, capable of handling both *WordPerfect* and the Japanese Kanji alphabet. Fukiko was recently in Japan again looking for a laser printer that will print both Japanese and American characters.

All of these writers are now fervent computer fans, with Noel Behn leading the parade. He has upgraded his hard-disk drive to 40MB, installed various speed-up utilities, and swears by the *Hot Line* telephone directory and auto dialing software that helps keep him in touch with a vast network of writers and actors. Behn also has a downtown office that he might equip with a laptop.

Hamill loves his machine, particularly the ability to take a break from one writing project and immediately switch to another and toy with it. He needs a larger hard-disk drive to accommodate a burgeoning body of stored work, and a faster printer. He will soon buy a 286 machine and is searching to find a scanner that will enable him to convert filing cabinets of previous works into computer format so that he can edit them.

"I think the computer is the greatest instrument yet invented for a writer," he says. "It removes the mechanics of retyping and editing and therefore frees you to think more clearly and with more subtlety about your work."

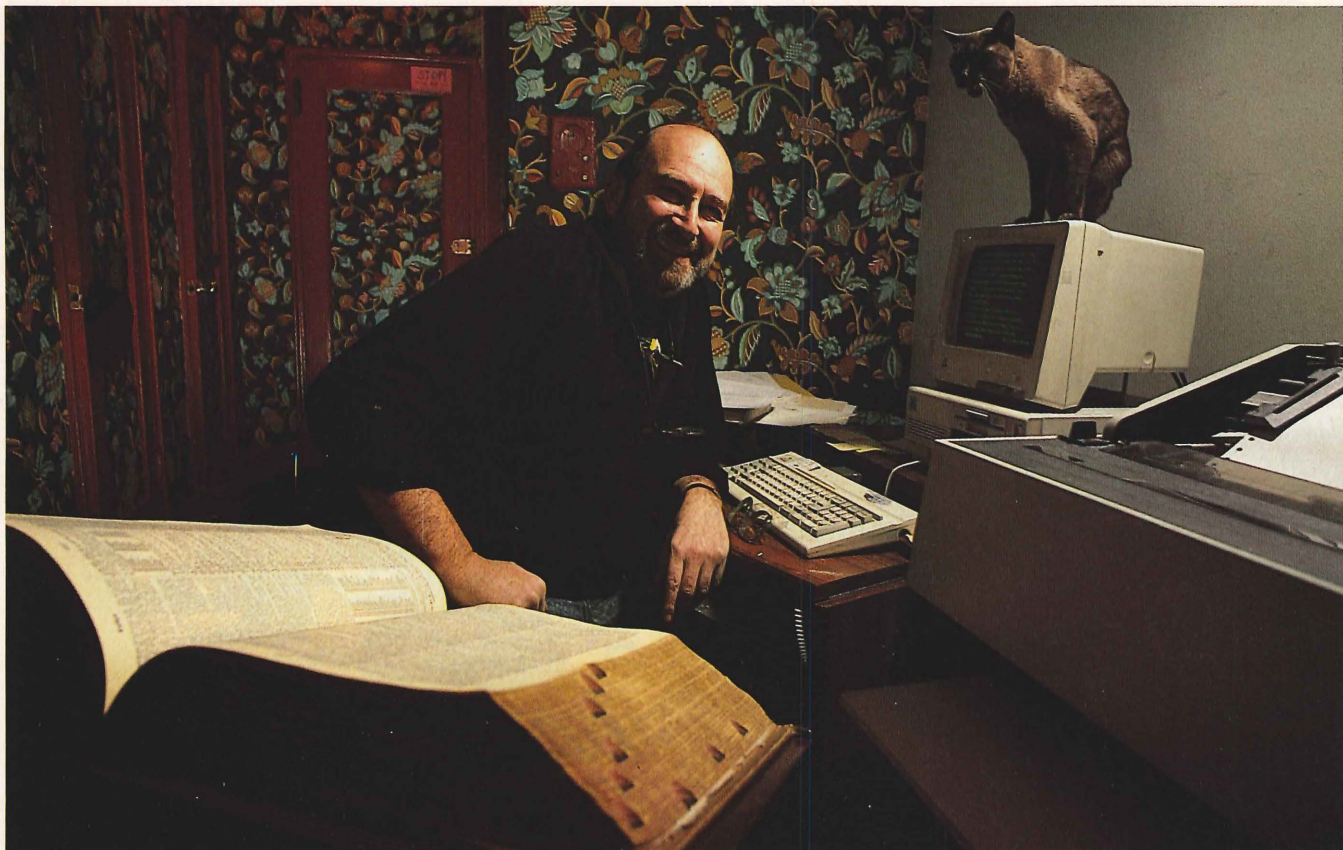
Shana Alexander began her latest trial drama, the corruption case against former Miss America Bess Myerson, with an extensive chronology of events. She now works with her two computers, two printers, a fax machine, and a personal copier. Her only computer gripe is that she finds no screen alpha-

bet as clear and precise as the one on the old Epson QX-10 monitor. "It was a beautiful alphabet, with none of those annoying serifs you find on all today's PCs," she says.

Jimmy Breslin never did buy a Brooklyn Bridge. "He's still basically a technophobe," says his stepdaughter and computer adviser, Emily Eldridge. "He just gets the computer to type up his columns. He knows the rudimentary commands, and he's happy enough with that." Counters Breslin: "My working style was electrified out of existence."

MARQUEZ AND HIS MACS

All over the world, typewriters have been scrapped. Two Decembers ago, Pete Hamill and his wife traveled to Havana, Cuba, to interview the Latin American writer Gabriel Garcia Marquez, author of *Love in the Time of Cholera*, *One Hundred Years of Solitude*, and *Chronicle of a Death Foretold*. As the New York journalist sat in a splendid old villa, he noticed a Macintosh computer on Marquez's desk. It was one of five, explained Marquez. He keeps Macintoshes in Paris, Barcelona, Mexico City, Havana, and his beach house in Cartagena, Columbia, and carries disks wherever he goes. "If I had had such a machine 25 years ago, I would have written five more novels," says the man who won the 1982 Nobel Prize for Literature. ■



Noel Behn's computer was quickly loaded with *Lightning*, *Quicken*, *FastBack*, and *Hot Line*. This was a man in a hurry.

Noel Behn used the Search function to link together previously unrelated suspects in the Lindbergh kidnapping.

Use the Mail to Build Your Business

In this day of super-fast fax and modem communications and overnight couriers, the U.S. Mail is often maligned as the U.S. Snail. Even so, it plays a crucial role in most businesses. Professionals find clients and business owners uncover customers through well-written, well-targeted direct-mail pieces or promotional newsletters. Many small businesses can distribute goods through the mail and forego expensive storefront real estate.

Every successful business will find a different way to make the mail work. To show a cross-section of uses, we present here three short case studies of how small-business owners are taking advantage of the mail. That's followed by a series of tips on how to build, manage, and use a mailing list, and then by a separate section on using the mail-merge function found in many word processors to create targeted direct-mail pieces. Next month, our cover story will highlight professionals who promote themselves by sending newsletters through the mail.

Adrienne Trow has been importing Dutch chocolate molds from her home in Davis, California, for six years. These are original antique, two-sided metal molds used in Europe to make chocolates with pictures imprinted on them.

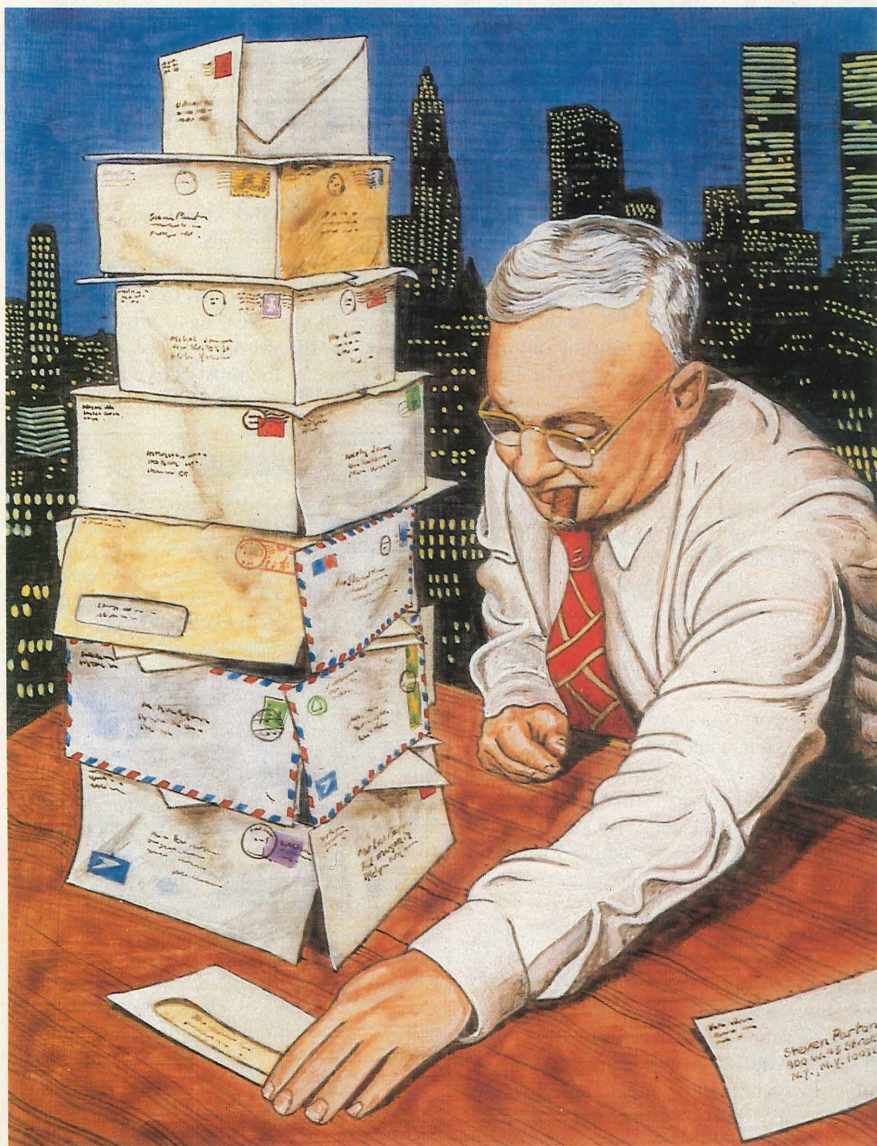
For five years, the molds were sold to wholesalers only by independent sales reps and at giftware trade shows. A year ago, Trow decided to branch out. She started a mail-order catalog called Holcraft Country Collection, which now includes other items of interest to her buyers. After just three catalog mailings, Trow's mail-order business has tripled.

Most businesses are forever striving to enlarge their mailing lists in the quest for new customers or clients. There's no one way to use the mail effectively to build or expand a business, as the following examples show. But almost every small business that does its own marketing and distribution finds a way to build a list and use it efficiently.

Trow, for example, started by renting

*Find New Customers and Clients,
Promote to the Media,
Resell to Existing Customers*

BY LYNIE ARDEN



LYNIE ARDEN is a member of HOME-OFFICE COMPUTING's Advisory Board and publisher of the newsletter, Worksteader News.

lists of collectors but later found that ads placed in country-lifestyle magazines worked better for her kind of business. She tracks where every inquiry comes from, what is bought, and how many times. Trow now has about 5,000 names on her list. Inquiries and actual buyers are both on the same list but they are coded to show the difference. Twice a year, Trow sends a catalog via bulk mail to everyone on the list. She keeps the names of people who have yet to buy for two to three years before dropping them.

USING DIRECT MAIL TO FIND CLIENTS

Although Trow finds advertising the best way to locate customers for her products and build a list, Phil Neal has discovered, through trial and error, that his computer consulting services are best received through more personalized direct mailings, perhaps because his is a more complex service that requires detailed explanation. "Some people told me to put a lot of money in ads, but it seemed to do no more than pay for itself when I tried it," says Neal, who lives in Brooksville, Maine.

Neal's company, MicroServices, sells two software packages that he created—one for police departments and one for real-estate companies. Neal first advertised in trade magazines, but now just buys the magazines' subscriber lists. "I buy the labels and put the names in my database," says Neal, who uses *dBase III Plus*. "Every two days, I send out 25 brochures."

By spreading out the mailings, Neal can keep things on an even keel. "In the beginning I made the mistake of sending out mailings of 1,000 at a time. I'd get a lot of response for about a week and the activity would completely die out after that. It also made it difficult to get the product out." And because Phil's customers generally call with questions before they buy, he was convinced that—with a single mass mailing—some potential customers were being lost simply because they couldn't get through the crush of calls. "I have fine-tuned this now so that I know what percentage will respond, how many will call, and how many will purchase."

The software sales pay to keep the business going, but what Neal is looking for is the one buyer in 20 who will ask him to customize the "generic" software. These are the clients who make the work and the dozens of phone calls all worth while. "Mailings are more work than just placing ads, but the work is worth it in the long run."

Neal now has a list of 15,000 names. When someone buys, that name is transferred to a separate database—his "house" list. Here, a great deal of information is tracked: a running statement of calls including the date and what was said; order dates, problems, comments, contact names; whether callers have had customization or consulting services and what was done; payment and

Adrienne Trow

BUSINESS: Importer of Dutch chocolate molds

PIECES MAILED AT A TIME: 5,000

FREQUENCY OF MAILINGS: Twice a year

COMPUTER: Hyundai PC

SOFTWARE: DB Mailer

ADVICE: "Back up your names every week and have a friend who understands computers."

Phil Neal

BUSINESS: Computer consultant

PIECES MAILED AT A TIME: 25

FREQUENCY OF MAILINGS: Three times a week

COMPUTER: IBM PC XT

SOFTWARE: dBase III Plus

ADVICE: "Keep records of what you do to make sure it's working. If it's not, try a different approach."

Dan Poynter

BUSINESS: Book publisher

PIECES MAILED AT A TIME: 50 to 5,000

FREQUENCY OF MAILINGS: Once a week

COMPUTER: Compaq 386

SOFTWARE: dBase IV

ADVICE: "Remember, no list pulls like your house list."

billings records; and what kind of hardware and software callers use.

The house list is also indexed by state so that it can be easily sorted to see where sales are strong. Once Neal has sent promotional material to the whole list, he will mail a second piece to the most active areas.

"The key is to experiment and keep re-

cords of what you are doing to make sure it's working. I find that if you just send out a thousand pieces, you don't know what's going to happen."

MAILING TO BUYERS FOR A SECOND SELL

Dan Poynter has grossed over \$3 million selling his self-published books from his home office in Santa Barbara, California. Para Publishing—with help from four full-time employees and three computers—offers books on desktop book publishing.

Poynter keeps a list of 21,000 prospects, including many small specialized lists he's compiled of people interested in book publishing. He also constantly puts out press releases offering free information kits that bring a steady flow of fresh inquiries to add to the list.

When a prospect buys, the name is assigned a number and is then tracked by date of last order or contact, and transferred to the house list. "My house list includes 5,000 customers who have bought in the last year. Every month, I send out a newsletter to the house list only." His *Publishing Poynters* newsletter is a one-page, two-sided information sheet of tips and ideas. Poynter also mentions his new books, consulting services, and upcoming seminars, and there's an order form printed on every newsletter.

"I can't understand people who get replies from ads and never do follow-up mailings. It's easier to sell an existing customer a second product than to find a new customer."

In addition to sending out retail offerings, Poynter also sends catalogs to wholesalers twice a year.

Offering secondary products and services keeps the cash coming from valuable customers, but Poynter's favorite cash-cow is renting out his lists. "There is a lot of money to be made in specialized lists. I sell my list over and over again. That's generally \$1,000 to \$1,500 every time I rent a list, with no overhead, so why not? I mention lists in *Publishing Poynters* because people look there for good leads. Also, I know a lot of people in publishing, and if I run across a good match I will send my mailing list brochure to them."

Poynter suggests looking for oddball lists to offer for sale. "Instead of dealing with huge generalized lists, computers make it possible to produce highly targeted lists. A big mailing-list broker wouldn't bother with these small lists, but they do have value, particularly to other small, home-based businesses. I encourage people to make up their own lists and to open up a new profit center."

A mailing list has but one purpose—to get business. Be creative and don't just let your mailing list sit there doing nothing. There's value in every name on the list. Use it again and again, and then look for new ways to wring extra cash out of it.

RESOURCES

DM News, The Newspaper of Direct Marketing, is a semimonthly publication distributed free of charge to qualified U.S. direct marketers and their agencies. Everything you ever wanted to know about the direct mail industry, including cataloging, telemarketing, electronic marketing, and list marketing, as well as FTC and USPS updates, is included. *DM News*, 19 West 21st Street, New York, NY 10010; (212) 741-2095.

Successful Direct Marketing Methods, by Bob Stone. Crain Books, 1979; \$29.95. A complete textbook on mail order and other direct-response marketing methods. Available by mail from NTC Business Books, 4255 W. Touhy Avenue, Lincolnwood, IL 60466; (800) 323-4900.

More Than You Ever Wanted to Know About Mail Order Advertising, by Herschell Gordon Lewis. Prentice Hall, Inc., 1983; \$10.95. A massive collection of examples, tips, advice, and techniques from a mail-order expert arranged in an easy-to-use guide. Available by mail from Ad-Lib Publications, 51 N. Fifth Street, P.O. Box 1102, Fairfield, IA 52556-1102; (515) 472-6617 (\$2 handling).

10 Ways to Grow a Mailing List

1. Get referrals. The highest quality prospects you can get are referrals from current customers, and don't wait for your customers to offer them. Asking for referrals should be a regular part of your business procedure. You will probably get more participation by offering some sort of incentive in exchange for the names. Offer a cash discount, a special premium, or a value-added service for the names of five people who might be interested in what you're offering.

2. Advertise. The quickest way to fatten up a prospect list is to place inexpensive two-step classified ads in newspapers and magazines. A two-step ad is one that invites readers to send for more details rather than attempting to make a direct sale with the ad alone. Everyone who sends for the information is a qualified prospect and should be added to a list for future contact, regardless of whether he or she buys the first time.

3. Look for free lists. In this information age, everyone is listed somehow, somewhere. Many lists are public and free for the asking. Want to get your message to every resident in a particular neighborhood? Check your library for a criss-cross or street address directory. You'll find every house number on every street in town. Want a list of new parents? Get a list of recent births from the local hall of records.

Business lists are just as easy to find. Maybe you have a service of interest to new business owners. You might check the public announcements in the newspaper or, for a small fee, you could have the government agency that issues vendor permits send you weekly lists of new applicants (not all states do this). Lists of professional license holders (dentists, lawyers, cosmetologists, contractors, and others) are available from the license-issuance offices in some states.

Many professional organization membership lists are available free or for a small fee. Thousands are listed in the *Encyclopedia of Associations* at your local library. While at the library, look for other useful directories. There are directories for everything, from lists of every gift shop in the country to all businesses doing over \$1 million in annual sales to every salesperson who handles tableware. If you can't find the directory you need, look in the *Directory of Directories*.

4. Rent a list. There are more than 50,000 different mailing lists indexed in *Direct Mail Rates & Data* (Standard Rates & Data Service, available at public libraries). Mailing lists are rarely sold, but usually rented for one-time use. However, you can carefully



enlarge your list by adding a box to your sales literature that says "check here to remain on our list." That legitimizes that particular name for inclusion on your inquiry list. Those who rent out a list, on the other hand, should ask that this phrase *not* be included, to protect their hard-earned list.

5. Swap lists. When your house list grows to a healthy size, consider swapping with another business. Swapping lists is particularly common among small businesses and professionals that have related products or services. You may want to swap only your prospect list, excluding current customers from the deal.

6. Offer a sample of your product or service as a premium. Make the offer through classified ads or through press releases. If you don't have a product that lends itself to this kind of promotion, create a special report or booklet providing valuable information. There are magazines devoted to these kinds of offerings, and a small write-up on your offer could bring in thousands of inquiries. For best results, be sure that the premium you offer is related to your main line of business.

7. Barter your lists. Bartering is different from swapping list for list—you need someone else's list, but they might have no interest in

yours. In this case, try exchanging your services for his or her list.

8. Generate interest through publicity. Send press releases to every publication with a readership that might be interested in what you have to offer. Get into print by providing useful information, and include a "tag" at the end of your press release that encourages readers to contact you for more details.

9. Class or seminar attendees make good prospects. Put your expertise to work—teach a class or offer to be a guest speaker. Those who attend should be automatically added to your house list. Make a deal to get class lists from other seminar leaders by providing useful handouts. For example, there are many classes available on how to start a home-based business. If you're, say, a bookkeeper, you might provide a hand-out sheet called "10 Tips for Easy Record Keeping." In exchange you would receive the names and addresses of all who attend the classes so you can offer them your services.

10. Offer a prize and hold a drawing. This is especially effective at large gatherings such as trade shows and conventions. Again, in order for the names to have any value to you, the prize must be related to your ultimate business offering.

Mailing-List Mechanics

Most people who work with mailing lists—whether it's to sell by mail order, to find clients through direct mail, to keep old customers coming back, or to promote a business to the media—know that a computerized operation is essential. In general, a database program, a word processor, a hard-disk drive, and a wide-carriage printer (to hold sheets of labels) are all that are needed. Beyond that, here are a few pointers on setting up an efficient system.

Setting up database fields. Before setting up your mailing-list database, you need to decide what information to track. All databases should include name, address, and zip code fields, which will print out on labels. Information that will not appear on the mailing labels but which might be useful for analysis includes: initial entry date, date of sale, amount of sale, accumulated purchases, type

of purchase (if you carry more than one type of product), telephone number, and source of original inquiry.

Choosing labels. Most businesses print on standard "one-up" peel-and-stick (or pressure-sensitive) mailing labels. They are inexpensive, easy to keep in zip-code order when applying to mail pieces, and work with the least expensive labeling machines.

These labels measure 1 inch high by 3.5 inches wide. Printing in standard 10-pitch mode, you can fit 30 characters across with small margins. It's important to keep this in mind when specifying field lengths in your database.

You will probably need only four or five lines on each label—name, street address, city and state, zip code, and perhaps an extra line for coding purposes. Keeping the zip code on a separate line (preferably the last)

will speed handling by the post office.

Bulk mail rates. To qualify for bulk rates (third class) you have to mail 200 pieces of the same item at the same time. The rate is 16.7 cents per 3.36-ounce letter, plus a \$60 annual registration fee with the post office. However, third-class mail can take up to four weeks, so it's not suitable for all mailings. For instance, you would probably want to respond to a customer inquiry with a first-class letter, but send promotional mail via third class.

If you are sending a one-ounce letter, you might try to find another marketer with a complementary but noncompeting product or service who has a one- or two-ounce letter. You can mail both in the same package and split the cost. Test this on a small scale first, to make sure the second offer doesn't "cannibalize" dollars from the first offer.

Five Tips on Mailing List Management

1. Keep three separate files. The first file in your mailing list should be your customer file, or house list. Include as much information as possible about your customers. In addition to names and addresses, consider including what each bought, when, why, how many times, and any pertinent demographic information.

The second file is the prospect file. A prospect is any potential customer who hasn't bought yet. Code each entry to indicate the source of the name.

The third file is a special file. It contains old customers who haven't recently bought anything, credit risks, and any other "problem" names. Code each name for easy "breakout." For instance, you may want to try a special mailing to old customers that includes a special coupon for "coming back."

An alternative to the three-file approach is to keep all names in one file, but code them as "customers" or "prospects" so you can divide them whenever you wish.

2. Keep it clean. To clean a list means to update names and addresses and remove "dead" names. On average, any list will be 20 percent undeliverable within a year—people move around a lot. It costs money to keep up with them and even more if you don't. To clean a list, direct the post office to send you the addressee's change-of-address information by noting "Address Correction Requested" below the return address. This will cost 30 cents per piece if forwardable; otherwise



there is no charge. Mailing lists should be cleaned once or twice a year.

3. Merge/Purge. The purpose of the merge/purge process is to omit duplications and thereby save money. It is also absolutely necessary if you are going to rent out your list. Use your computer to merge/purge by comparing all secondary lists to your house list. Always use your house list as a base. This becomes particularly important as you begin to generate names from multiple sources.

Those who rent lists should also purge to weed out names of people who already own the product they're offering.

4. Rule of Seven. To get the most value from your list, use it often. The Rule of Seven says that you have not fully tested the potential response until you have contacted prospects

at least seven times within 10 months. Different approaches, different offers, different timing, and repeated exposure will bring new orders.

5. Rent out your list. To wring some extra cash from your list, you may decide to offer it for rent to other marketers. If you handle it properly, you can expect to earn about \$1.20 per name per year from your house list. A list-management company will handle the maintenance and rental of lists larger than 3,000 names. Any list smaller than that you would have to sell yourself.

There are two dangers to watch for when renting: Don't rent your list to any type of competitor, and take precautions to ensure that your list is not used more often than it is being paid for. You should salt your list with names of friends so you can tell when unauthorized mailings are sent out.

How to Send Effective Mass Mailings by Creating Personalized Letters

Complete Answers to Mail-Merge Questions and Software Suggestions

BY CHARLES BERMANT

Much is made of the personal computer's communications versatility, from the instantaneous sending of complex documents across distances to the creation of compelling graphics. Yet the most useful means of communicating by computer are often more mundane.

Take mail merge—the practice of blending text with information from a data file. Compared to such cutting-edge applications as presentation graphics or desktop publishing, mail merge is decidedly unsexy. Even though it's a part of nearly every word processor, it more often than not is the menu item not taken. But those who take the time to learn mail merge usually peg the process as a small feature that becomes a big help.

Mail-merge procedures, admittedly, could be easier to learn. Still, it can help anybody who needs to send roughly the same message to more than one person. (See "Use the Mail to Build Your Business" on page 49.) If mail merge is required in a large firm that does high-volume mailing, it may be even more essential in the home office, where every minute saved equals money earned.

Q: What is mail merge?

A: Mail merge is the process of combining text—typically a letter—with names, addresses, and other details from a database to create a personalized message. Used primarily to send the same basic message to different names and addresses, mail merge allows you to mark places in a text (typically a word-processor) file for insertion of material from database fields. The software then takes the information from the data source, places it into the appropriate gaps, and prints the document as many times as necessary.

Mail merge has been a direct-marketing tool for years, typically created with main-frame computers. Used in sweepstakes, for

sales pitches, and by banks, it has varying results. The merged data, usually just a name, address, and salutation, often clashes with the rest of the message, especially the typography. Personal computers, however—for which two of the most popular applications are word processors and databases—are natural forums for more sophisticated combinations of text and data.

Q: Can you give me three good reasons to use mail merge?

A: First, mail merge will save you time when you need to send a standard or repeated message to a list of contacts. Second, once your mail-merge system is set up, you'll avoid typos by printing out letters to several people with only a few keystrokes.

Mail merge's third advantage is its effectiveness. Whether you are trying to inform your clients of an address change or inform customers about a new product, if the recipient believes the letter was addressed to him or her personally, your message is more likely to get across.

Q: Besides name, address, and salutation, what details can be merged?

A: While the content of mail-merged letters is essentially the same, details can be tailored to each recipient—anything that can be tracked in a database can be merged into a document.

After the address and greeting, you might include account numbers, purchase information, or balance figures. Beyond that, if/then fields can be created. For instance, should a customer's balance due fall below a certain level, the phrase "thank you for your prompt payment" will follow. For those with a balance above that level, a slightly more pointed message can be inserted automatically. In a letter going out to existing customers, a mail-order business might include a phrase about an earlier purchase, tying it to one of several new items. Such a merge would say something like this: "If you enjoyed your recent order of our famous Belgian Chocolate-

Dipped Pecans, then you'll probably find our new Honey-and-Hazelnut Butter Crunch equally palate pleasing" for one customer, substitute "Pineapple-Glazed Almonds" and "Mandarin Orange Butter" for another customer, and so on (see "Mail-Merge Steps").

Q: What software do I need for mail merge?

A: Most full-featured and even many mid-range word processors include mail merge. When using such programs, you set up the data file (a roster of names and addresses) either with a supplied list manager or by word processing a highly structured document. If, however, you also want to track customer information not meant for mail-merge letters, or extract and mathematically manipulate parts of your data file for reports, you'll need a full-fledged database in addition to your word processor. Any database can be used for mail merge as long as the program can create files with *delimiters*—characters such as commas, returns, or tabs, which indicate the end of each data field—that match your word processor's mail-merge requirements.

Most integrated packages, which incorporate both a database and a word processor, provide mail-merge capability. However, you might want to distinguish between integrated software with good, but basic list management (such as Microsoft *Works* or *PFS:First Choice*) and *Symphony* or *Framework*, which let you develop complicated custom applications with programming languages. Integrated data managers like *Q&A* and *RapidFile*, which combine sophisticated databases with good, mid-level word processors, were specifically designed to unite lists with text, and they work well for mail merge. Another smart mail-merge choice, particularly for salespeople, is a tracking program such as *Sales Ally* or *C.A.T.*

Q: How do I choose the right software?

A: Begin by looking at the programs you currently use. In one possible scenario, your word processor already does mail merge, but

CHARLES BERMANT wrote the "Buyer's Guide to 24-Pin Dot-Matrix Printers" in last month's HOME-OFFICE COMPUTING.

B Mail-Merge Steps

January 15, 1989

title
first name
last name
address
city
state
zip
last order
new item

Mrs.
Audrey
Lamb
234 Bright Lane
Sunrise
FL
33322
Milk Chocolate Dreams
Marshmallow Cluster Delights

Mr.
Alan
Zephyr
"245 Green Road, Apt. 10"
Davis
CA
95050
Belgian Chocolate-Dipped Pecans
Honey-and-Hazelnut Butter Crunch

Dr.
Denise
Dockery
23 First Ave.
Minneapolis
MN
55453
Pineapple-Glazed Almonds
Mandarin Orange Butter

Ms.
Judith
Nicholas
"192 W. 85th St., Apt. 2E"
New York
NY
10024
Amaretto-Laced Wafers
Grand Marnier Filled Chocolates

{title} {first name} {last name}
{address}
{city}, {state} {zip}

Dear {title} {last name},

Thank you for purchasing fruits, nuts, chocolates, and other confectionary delights from us this past year.

If you enjoyed your recent order of our famous {last order}, then you'll probably find our new {new item} equally palate pleasing. You'll find more information about {new item} and all our other new treats in the enclosed catalog.

Should you have any questions about The Candy Company, please give us a call on our toll-free number. Our work, {title} {last name}, is your pleasure.

Sincerely yours,

Betty Booper
Chief Candy Maker

While the particulars of any mail-merge system may differ, the basic steps remain the same: The contents of a data file are placed into the indicated slots of a template letter in order to create a series of personalized letters. In the representative mail-merge steps pictured here, the data file [A] was exported from a database with a return character at the end of each field—last name, address, zip, and so on. This file format (called "return delimited") puts each field on its own line, with each record separated by a line. Note that the field names at the top of the data file are in the same order as the actual fields below them. Also note that lines with commas, such as Alan Zephyr's address, are enclosed in quotes, since commas—like return characters—can act as delimiters between fields (depending on the word processor). Then the template letter [B] is created, with spaces for each data field's contents reserved within curly braces like this: {last name}. The actual mail-merge process sequentially joins each record in the data file with a template letter, printing out a series of letters. One of the final letters [C] is shown here. Since each customer's record in the data file was set up with both the last order and a suggested new item, each letter has been tailored for the recipient beyond the typical name and address.

Mrs. Audrey Lamb
234 Bright Lane
Sunrise, FL 33322

Dear Mrs. Lamb:

Thank you for purchasing fruits, nuts, chocolates, and other confectionary delights from us this past year.

If you enjoyed your recent order of our famous Milk Chocolate Dreams, then you'll probably find our new Marshmallow Cluster Delights equally palate pleasing. You'll find more information about Marshmallow Cluster Delights and all our other new treats in the enclosed catalog.

Should you have any questions about The Candy Company, please give us a call on our toll-free number. Our work, Mrs. Lamb, is your pleasure.

Sincerely yours,

Betty Booper
Chief Candy Maker

January 15, 1989

your customer list is growing so large that you want to add a database in order to more easily handle the list. Another possibility is that you already work with a database, but don't have a word processor with mail-merge capability, so you need one to merge and print the text. Make sure that the database's files are compatible with your word processor; that's not difficult with popular packages like *WordPerfect* and *dBase III Plus* (word processors, when boasting mail-merge scope, usually flaunt *dBase* compatibility).

If you're still looking for the right software for mail merge, a sales-tracking or integrated package is your best bet. In these, the same commands across applications can make the program easy to learn. And there's no danger of data incompatibility with a single program. (See "Five Software Setups for Mail-Mergers.")

Q: How many letters can I print in a single mail-merge session?

A: Limitations vary from program to program, yet in most cases the capacity is gov-

erned by hardware—the amount of memory and the size of your hard disk. Software is still a factor, however. For instance, *Frame-work III* requires that all mail-merge data be in memory, which limits the list to about 3,000 names with a 2MB configuration. If you don't have megabytes of memory, you may want to break up a large merge task by splitting the data into smaller files. The number of names in your list is limited by your database's capacity; the word processor acts only as a mouthpiece and does not govern quantity.

Q: How do I get the letter to print well?

A: Of course words always count, but looks are also critical in a mass mailing using mail merge. How your message comes across directly relates to how the letter appears.

No special technology is needed to support mail-merge output, since the printing ability comes from the word processor itself. Any custom fonts, layouts, or graphics that your hardware and software can handle are adaptable to mail merge.

In the early days of mail merge, dot-matrix output was standard and laser printers offered something special. Today, laser printers are the standard, so users must seek new ways to produce documents that will beat the competition. Some mail-mergers, in an attempt to produce attention-grabbing copy, are already outputting integrated text and graphics through laser printers. This too will soon become standard.

Q: How do I match up a letter with the corresponding envelope?

A: If your database can handle the mail-merge list, it can probably print mailing labels or, with the proper printer, put addresses directly on the envelopes. Some word processors can also create labels. In either case, you'll want to sort the data file by zip code ahead of time to take advantage of the post office's bulk rate (or by last name if bulk rates don't matter), then merge letters and print labels. Your letters and envelopes should be in the same order, ready to be combined.

These steps are necessary, but can grow tedious. To eliminate the need for mailing labels or printed envelopes, consider windowed envelopes.

Q: What errors may befall a mail-merger?

A: The worst thing is for the mail-merge process to be discernible to the recipient, resulting in a mailing that looks like a circular from Ed McMahon and friends. Your first step should be a test printing, to make sure that the output looks good.

Beyond print quality, the most important factor is data integrity. If the information you are merging is correct, then the letter will be correct. Most potential mistakes boil down to carelessness—spelling errors, bad writing, or mismatching letters and envelopes. To avoid such errors, spell check both the draft letter and the data file (save your data file as text in order to check spelling within your

word processor or with a separate spelling checker).

If the recipient believes a letter was personally addressed, your message is more likely to get across.

Q: What will mail merge offer in the future?

A: Down the line, mail merge will perform more functions and be more trouble free. For example, you'll find mail-merge programs that can insert information from two or more source files into a single document in a way that is transparent to the recipient. Another

possibility is a form of artificial intelligence that points out possible errors a spell checker might not catch; for example, if your software started to merge a fund-raising letter to a "Mr. Meryl Streep," it would remind you that Meryl is not usually a man's name.

Future mail-merge systems will standardize many of today's advanced features—on-screen preview, seamless integration of graphics with text, and enhanced macro functions. Photographic quality gray-scaled images will be easily incorporated into text; a real-estate agent, for instance, will be able to drop a picture of a specific house into a sales letter.

As other areas of computing capability evolve, they will trickle down to the mail-merge-environment in relatively short order. Mail merge usage will continue to grow, as businesses of every size compete to drive their messages home.

Five Software Setups for Mail-Mergers

In order to help you find the best solution for creating your personalized direct-mail pieces, we've put together an outline of five mail-merge options, with their strengths and weaknesses and several software suggestions.

Word Processor/Database (Low Budget). In many cases, you can set up a mail-merge system with an inexpensive word processor alone. For example, *Webster's New World Writer II* (Simon & Schuster Software), *Professional Write* (Software Publishing Corp.), and *PC-Write* (Quicksoft) all offer well-designed mail-merge functions. Still, creating the data file with a word processor is exacting, so you might want to add a file manager such as *Prodex* (Prodex Development) or *Professional File* (Software Publishing Corp.). *Prodex*, for instance, excels as a Rolodex-type program. Addresses stored in *Prodex* can be tagged, one at a time or in groups, and sent to a word processor's text file. The advantages are ease of use—both word processor and database are simple to master—and versatile list management. *Prodex's* disadvantage is its inability to merge anything beyond name and address.

Word Processor/Database (Name Brands). Microsoft *Word* (Microsoft Corp.), *WordStar* (MicroPro International), or *WordPerfect* (WordPerfect Corp.), matched with *dBase III Plus* (Ashton-Tate Corp.) or one of its compatibles, such as *FoxBase+* (Fox Software), make a safe, powerful mail-merge combination. Even if you select a database other than *dBase*, chances are your choice will imitate the file format. This standard setter, along with one of the three men-

tioned word processors, will yield a heavy-duty and versatile mail-merge system. The disadvantages are the inability to achieve real integration between applications beyond mail merge, and the nonintuitive nature of all these programs.

Integration. Lower-end integrated packages such as *PFS:First Choice* (Software Publishing Corp.), *AlphaWorks* (Alpha Software Corp.), *Microsoft Works* (Microsoft Corp.), and *AppleWorks GS* (Claris Corp.) can perform adequately for mail mergers, but lock you into a single mail-merge process. More sophisticated packages like *Framework* (Ashton-Tate Corp.) or *Symphony* (Lotus Development Corp.), on the other hand, offer greater flexibility and customization. Their built-in programming languages facilitate the development of custom applications with the ability to draw data from several files at once. The advantages of any integrated package are the consistent commands across the applications and the perfect data compatibility. The disadvantages, especially for the higher-end programs, are that the procedures are difficult to learn and quirky. For instance, *Framework* requires that all names to be merged must be in memory.

Specialized Software for the Generalist. Though not designed solely for mail merge, integrated programs like *RapidFile* (Ashton-Tate Corp.) or *Q&A* (Symantec Corp.) make it easy to become adept at mail merge—and might be the best choice for someone just starting out. Both programs are intuitively designed with integration of data and text in mind. You can create databases using multiple fields and also slot a variety of details

easily into your text. The advantage is the focus on joining data and documents. This can also be a disadvantage—if your needs move beyond this narrow integration, these programs might seem stifling.

Sales Tools. Activity trackers—programs designed for salespeople or anyone with heavy client or customer contact—typically offer mail-merge systems. Here, along with other features such as an appointment calendar, phone dialer, and a mailing-label maker, a basic word processor is paired with a file manager for output to your printer. Software recommendations include *ACT!* (Conductor Software), *Sales Ally* (Scherrer Resources), and *C.A.T.* (Chang Labs) for the Macintosh. The advantages are similar to those of the integrated software above, but the main disadvantage is that you might have to buy more features than you really need. ■

PUBLISHERS

Alpha Software Corp., (617) 229-2924
Ashton-Tate Corp., (213) 329-8000
Chang Labs, (408) 246-8020
Claris Corp., (415) 960-1500
Conductor Software, (214) 929-4749
Fox Software, (419) 874-0162
Lotus Development Corp., (617) 577-8500
MicroPro International, (415) 499-1200
Microsoft Corp., (206) 882-8080
Prodex Development, (206) 527-2898
Quicksoft, Inc., (206) 282-0452
Scherrer Resources, (215) 242-8751
Simon & Schuster Software, (212) 373-8882
Software Publishing Corp., (415) 962-8910
Symantec Corp., (408) 253-9600
WordPerfect Corp., (801) 225-5000

When Theater Meets Big Business

A Husband and Wife Pool Their Talents to Stage a Unique Service for the Corporate World

BY STEPHEN P. HERMAN, M.D.

All the world's a stage for Margaret and Joe McGovern of Martinsville, New Jersey. Margaret, an actress and director, and Joe, an ex-consultant, own Simulations, Inc., an unusual home-based business with yearly revenues of half a million dollars. Simulations provides professional actors and actresses to corporations and educational institutions for training programs.

A large pharmaceutical company, such as Merrell Dow, for instance, might want to put on an educational program to teach psychiatrists various ways of interviewing psychiatric patients with certain behavioral disorders. These "patients" are actors who have been specially trained by Simulations to play individuals with illnesses. They have entire lives written for them and rehearse intensively with Margaret and a consulting psychiatrist. They can then simulate an actual doctor-patient interview before a professional audience. These actors look so real that even doctors told about the simulation beforehand cannot believe they are watching actors. The McGovern's projects have become important teaching resources within corporations and at medical conferences nationwide.

THE IDEA

Their success is due to their creativity, respect for each other's abilities, and entrepreneurial spirit. The McGovern's were married in 1962. In the late seventies, Margaret, already the mother of two teenage girls, was studying theater arts at Douglass College, part of Rutgers University in New Jersey. While there, she was part of a team of simulators put together to teach medical students how to interview patients. "I can't take the credit for creating the idea," says Margaret. "It had already been done—but never commercially."

Joe said that it was "by the sheerest coincidence" that he and Margaret became involved in this endeavor. After Margaret's work as a simulator for the medical students,

she participated in a similar project for pharmaceutical company Hoffmann-La Roche Inc., where someone had heard about the use of simulators in teaching, and thought this method could be used to train its salespeople. The company was launching a new psychiatric drug and wanted to be sure its sales reps knew what they were talking about. So Margaret played a patient and Joe got into the act as well. After that, Hoffmann-La Roche asked Margaret to help make videotapes of patient simulators for the American Psychiatric Association. Pleased with Margaret's work and her uncanny ability to find the appropriate actors and direct them so realistically, the company asked her to do more projects for them. That's when the lightning struck: On May 1, 1979, the McGovern's officially became Simulations, Inc.

THE CLIENTS

Margaret began to pitch the idea of simulations for training salespeople to several pharmaceutical companies. Skeptical at first, more and more executives became interested and eventually bought the idea. She went to Actors' Equity Association, the professional

actors' union, and worked out a special agreement to cover the proper payment and working arrangements for the actors she hired. Later, she contracted with the Screen Actors Guild.

Over the years, Margaret has compiled resumes and pictures of more than 2,000 professional actors and actresses. She has always been involved in casting and directing, and has a reputation for being intelligent and compassionate. As a result, a job with Simulations is highly sought after by professional actors. They know they will be treated with respect and paid well. They also get to travel all over the United States.

Joe, meanwhile, was only peripherally involved in the beginning—he was working as a training consultant to the chemical industry. In 1980 he participated in another one of Margaret's simulation programs, this time for CIBA-GEIGY Pharmaceuticals. On a stage in Dallas, playing a physician, Joe McGovern became hooked. From then on, he devoted his business career to Simulations, Inc.; he is vice president and his role is to seek out new clients, prepare presentations, and organize the finances and record keeping. Margaret is president.

Over the last few years, they have counted as their clients such companies as Mead Johnson, Merrell Dow, Lederle Laboratories, Merck & Company, and Illinois Bell—training district managers and salespeople, as well as doctors in various medical specialties. They charge based on the size of the project, how many actors they'll need to hire, how much traveling they'll do, and so on. They expect to gross \$500,000 this year.

THE COMPUTERIZATION

Simulations is run from an office in the McGovern home. They have a full-time project manager, actress Janet Quartarone, who helps with virtually every aspect of the business. And Joe and Margaret's 23-year-old daughter, Ann, has also acted for Simulations. She is now pursuing graduate study in drama.

Their home office is a converted back porch, filled with technologically sophisti-

SNAPSHOT

Joe and Margaret McGovern

RESIDENCE: Martinsville, New Jersey

BUSINESS: Simulations, Inc., providers of professional actor-simulators for corporate training and educational programs.

EQUIPMENT: IBM PC with 20MB Plus Hardcard, IBM AT with 30MB hard disk, AT&T 6300 with 10MB hard disk and 20MB Plus Hardcard, HP Laserjet II, QMS Big Kiss Laser Printer, Qume Sprint 11/55 daisy-wheel printer, Panasonic FP 3037 copier, Sony 3/4-inch VP5000 videocassette player, 2 Panasonic AG-1950 1/2-inch VHS editing decks, Panasonic AG-A95 editing controller, EXTROM telephone system, Hayes 1200B modem, Sharp FO-420 fax machine

SOFTWARE: Lotus Symphony, Microsoft Word, dBASE IV, Q-DOS

RX FOR SUCCESS: Exquisite attention to detail, honesty. "We don't promise what we can't deliver," says Joe. "We work very hard and don't take ourselves too seriously."

STEPHEN P. HERMAN, M.D., is a psychiatrist who has written for such publications as *Video and Parenting*.



"We're the only people in the country who do this. There is no one else."

—Joe McGovern

cated equipment. "One of the things I am most proud of," says Joe, "is that we have made really good decisions about purchasing equipment for this business." After going through several electric and electronic typewriters, the McGoverns entered the computer age. In the fall of 1983, they bought an IBM PC and an Okidata dot-matrix printer. In 1985, Joe purchased a Bernoulli Box and launched the company into the world of the hard disk. He taught himself *Symphony*, *dBASE IV*, and *Microsoft Word*, and over the years has purchased a daisy-wheel printer,

two laser printers, several other computers, a modem, and a fax machine.

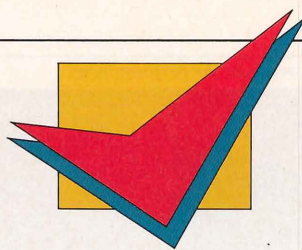
Using his computer, he keeps a detailed multifield database of the actors (in case they need a glamorous 45-year-old redhead or a 70-year-old man who speaks with a brogue), scripts, budgets, various notes, correspondence, and the company's financial data. "That PC absolutely changed the business," says Joe. "No question about it."

Margaret added, "He started to come to bed with books every night. I saw a man who hardly ever read a book, gobbling up manual

after manual and immediately trying out what he had learned on the computer."

THE FUTURE

Joe and Margaret look forward to the coming years. They enjoy working together and have several large projects on the horizon. They have appeared on television and radio and have been written about in *People* and in *The New York Times*. They are still excited about what they do. "We're the only people in the country who do this," beams Joe. "There is no one else." ■



A Legal Checklist for Startup Businesses

Protect Yourself by Knowing the Laws and Regulations Before You Begin

BY LYNIE ARDEN

It's fairly simple to get started in a home business—maybe too simple. Before you know it, you're sending out invoices and express-mail trucks are making daily deliveries—and the next thing you know, someone wants to see your business license.

Even small-scale operations must follow a set of rules. Many a home business has been brought to its knees, after years in business, by some silly little technicality that was overlooked. Whenever you exchange a product or service for money, you are effectively in business. And that automatically creates certain legal obligations.

Here's a checklist of laws and regulations with which you should be familiar when starting a business. With an ounce of prevention, small stumbling blocks won't become insurmountable problems.

1

Check local zoning laws

Most municipalities restrict certain types of home-based businesses. Find out if the business you're planning is legal to operate where you live by asking the town or county clerk for a copy of any ordinances concerning home occupations. Also check with homeowners' associations and examine your house deed for restrictions. Zoning is probably the only legal barrier to starting your home business.

2

Choose a legal name

Before you can start calling your business by any name, check with the county clerk or secretary of state to make sure that name has

not been claimed by someone else. In some states, there cannot be two businesses with the same name, and every business name is kept on a database. If the name is not taken, file a fictitious business name statement. If you use your own name as the business name, as in John Doe Associates, such registration is still required if someone else is using the same business name.

3

Set up a legal form of business

There are three basic types of business: sole proprietorship, partnership, and corporation. Most home-based entrepreneurs opt for a sole proprietorship. It's easy to start, with no paperwork to complete or laws to follow. All you have to do is say, "I'm in business" and file a Schedule C tax return. In a sole proprietorship, all the profit is yours and so is all the responsibility. From a legal liability standpoint, there is no difference between you personally and your business. Therefore, a business loss also becomes a personal loss.

A partnership, where you share the earnings as well as the liabilities with another person, is also easy to start, and doesn't require any legal paperwork. However, because dividing up responsibilities and authority can cause conflict, you should never enter into a partnership without a written agreement signed by both parties.

A corporation is an entity unto itself and lives on with or without you. It is a legal entity for which you must file papers. A corporation relieves you of some (not all) liability, allows you to raise expansion capital more easily, and is heavily regulated.

4

Get any necessary permits and licenses

You're likely to need a business license from your state, town, or county. In some cases, banks will not open a business account without one. If you are caught operating without a license when one is required, you could be fined and your business shut down.

State and local consumer-protection agencies require testing and licensing for various occupations that deal with the public. Any food-related business will be subject to stringent rules and inspections by local and state health departments. If you work with flammable or dangerous materials, the fire department may have to inspect your premises and issue a permit. State and local environmental agencies have jurisdiction over businesses that release any kind of toxic substance into the air or water. Other businesses requiring special permits from various state agencies include child care, care of the elderly or handicapped, work with animals or agricultural products, and direct sales. If you are selling taxable items, you will need to get a resale tax certificate (or seller's permit).

5

Use copyrights or trademarks

Most people know that written works are protected under the copyright law. The own-

Contributing editor LYNIE ARDEN also wrote "Use the Mail to Build Your Business" in this issue.

er of the work is protected as soon as the copyright notice, followed by the year of first publication and name of holder, is placed upon the work. For full protection under the law, a copyright can be registered with the United States Copyright Office for \$10. Other works that may be copyrighted include visual arts (photographs, charts, technical drawings, diagrams, and models) and performing arts (sound recordings, films, and choreography). Titles and names cannot be copyrighted, but names and logos may be protected by establishing a trademark. Check with the Patent and Trademark Office or an attorney. To put a trademark into effect, you must use it regularly in the course of business, with the TM notice. Then file an application for trademark with the Patent and Trademark Office in your state; if you do business in other states, file an application at the federal level. The same office issues patents to protect inventions and product designs. For more information on copyrights and trademarks, call the Federal Information Center.

6

Know the FTC trade rules and regulations

The Federal Trade Commission has some very specific rules about conducting business. For instance, a mail-order business must ship all orders within 30 days, or the advertised time period. Otherwise, the customer must be notified and offered a refund.

WARNING! ANCIENT ZONING LAWS ARE STILL IN EFFECT

Zoning laws may seem mundane or outdated, but you can't ignore them. If you are caught in violation of zoning laws, you may be forced to stop doing business immediately.

Zoning restrictions prohibiting all, or just some types of home occupations are a hangover from the Industrial Revolution, when commercial and home life were separated for the first time.

The purpose of these ordinances is to keep a residential neighborhood safe, quiet, clean, and free from commercial activity that would be inconsistent with its residential nature. No one wants to raise children in a neighborhood where heavy trucks come and go and neon signs light up the front lawns. The key to preventing problems is consideration of your neighbors. Since nine times out of 10 it's your

The FTC also has laws concerning labeling and packaging, consumer safety, customer testimonials and guarantees, and truth in advertising. There are also rules pertaining only to particular industries. For complete information, write to the Federal Trade Commission, 6th Street and Pennsylvania Avenue, NW, Washington, D.C. 20580.

7

Pay estimated taxes

If you're self-employed, you will probably have to pay estimated taxes quarterly. If in doubt about how much to pay, pay at least as much as you paid in taxes the previous year, and the IRS cannot penalize you. When you get paid, remember to set aside money for taxes, including the self-employment tax, which is 13.001 percent of the first \$48,000 of income.

In order to qualify for the Home-Office Deduction, your workspace must be separate and for the exclusive use of business. To understand this important deduction, send for IRS publication 587. (*For more information on home-office deductions, see "Cut Your Taxes," in the February issue.*)

8

Protect your business with insurance

To protect yourself against a lawsuit, you may need to purchase more insurance. Inventory insurance may be necessary if you sell

neighbors who will report you, be sure to follow the Golden Rule.

There are basically two things you can do if a zoning ordinance prohibits you from doing business at home: obtain a variance or get the ordinance changed. A variance makes an exception just for you. You must show that your home is the only feasible place for you to operate your business; that your business is similar to another that is allowable; or prove that your business would have no ill effect on the neighborhood. Before trying to get a variance, do research to find out what other kinds of businesses are operating in your area.

Changing an ordinance is more difficult and time consuming. To actually change the law, you need a feel for the local political atmosphere, an attorney experienced in dealing with the municipality, and cooperative neighbors. Form a strong alliance with other home-business owners and enlist the help of your neighbors with a petition.

products, and you may want to get a health insurance policy. In case a customer is injured while at your house, you will need broadened coverage in your homeowner's policy and/or personal liability. General liability will cover accidental damages you may incur at a customer's residence. Product liability covers injuries or damages caused by your services or products, though it's almost impossible to get this kind of coverage without a storefront operation. To protect business equipment in your house, you may need a special rider to your homeowner's policy. For more information, check with your attorney and insurance agent.

9

Understand your contracts—past, present, and future

Check any employment contracts you may have agreed to during the few years before going out on your own. A non-complete clause, for example, could restrict business activities for a prescribed length of time or geographic area, or prevent you from taking clients with you. As an independent contractor, be wary of signing any new contracts that restrict you from doing other work. Create a standard contract to use with your clients. It should spell out what will be expected of both you and your client.

10

File paperwork for employees

Before hiring your first employee, you must apply for an employer's federal identification number. It's available, free of charge, with Form SS-4 from the IRS. An employer is required to file quarterly and year-end payroll tax returns, contribute to an employee's Social Security, keep W-4 forms for each employee, file a W-2 form for each employee, and maintain a safe, healthy work environment. Most states also require employers to provide workers' compensation insurance and unemployment insurance. Complete information about wage and hour rules is available from any U.S. Department of Labor branch office.

Since hiring employees is complicated and expensive, you may consider using independent contractors instead. Although this alternative would eliminate a lot of paperwork and responsibility for withholding taxes and insurance, keep in mind that an independent contractor cannot be controlled. File Form 1099 (miscellaneous income) to report annual income of more than \$600 for a non-employee. ■

Electronic Typewriters: Old Standbys Get New, Powerful Features

BY MARTIN BIHL

Since the 1940s, typewriters have been fixtures in offices worldwide, used for letters, reports, presentations—everything that needed to be printed.

Today, even with the proliferation of computers, typewriters still have a place in many home offices. They are handy for quick, small typing chores where it may take as long to fire up the computer and word processor as it does to type the letter. (HOME-OFFICE COMPUTING still uses four typewriters.)

Typewriters have advanced at a much slower rate than other office equipment. First came manual typewriters: You remember them, the ones you had to pound on in order to type a letter. Manufacturers then added motors and produced electric typewriters.

The newest version is an electronic typewriter—a cross between a typewriter and a computer. From the typewriter comes the basic design and function. Computers contribute spelling checkers, memory, and other features to streamline the typing process. Several of the electronic typewriters on the market are also compatible with computers, so they can double as letter-quality printers. But because of their slow print speed, they should be used only as occasional or emergency printers.

EASE OF USE

When choosing a typewriter, comfort is paramount. Take advantage of stores that allow you to try the equipment before making a purchase. Type a letter and notice how the keyboard feels. Is it too stiff or mushy? Deciding whether you like a particular typewriter is a subjective process, just as it is with computer keyboards. Some people like keyboards that require firm pressure, whereas others prefer a soft touch.

Then, do some basic editing of your letter and see how the special function keys are laid out. Trust your instincts. If you feel that the placement of the keys is confusing, or that too many steps are required to perform simple operations, go on to another machine.

SIMILARITIES

All the units reviewed here—indeed, almost all electronic typewriters—share many of the same features, such as boldface and underline. Also fairly common are such for-



The Smith Corona XD-7500 sports a whopping 10-line correction memory.

matting features as indent, flush right, justify, decimal tab, and centering. All the electronic typewriters reviewed here allow you to create, store, recall, delete, and print documents. Several also tell you how much memory is left.

Print quality from electronic typewriters falls into two classes: dotty and sharp. Machines with dotty print quality use a thermal transfer printing method. Electrically heated wires melt the ink from the ribbon onto the paper to form the characters. Since the letters are formed from a matrix of dots, they're not always crisp.

The five typewriters reviewed in this article use a daisy wheel, an impact printing system on which characters are positioned on "fingers" at the ends of spokes. In this

system, the wheel is rotated to position the desired character in front of a hammer. The hammer then strikes the finger against the ribbon and paper, resulting in crisp, fully formed type.

DIFFERENCES

Although many electronic typewriters look similar, there are differences. For example, the Smith Corona XD-7500 and the Panasonic KX-R350 allow you to move blocks of text from one part of the document to another—the beginnings of word processing. But the other three typewriters reviewed do not offer this useful feature.

And there are some features that are standard, but are implemented differently on each machine. The most important are memory, spelling checkers, print speed, and paper-width capacity.

MEMORY

The feature that really sets electronic typewriters apart from electrics is memory. With electronics, you can store often-used words, phrases, formats, even entire documents, in the machine, and call them up at the push of a few buttons. The Xerox MemoWriter can store 15,000 characters (where each letter, comma, space, and tab stop equals one character), while the Canon S-68S's memory is less than half that size (6,000 characters).

REVIEWED IN THIS ISSUE

Computer:

Compaq Deskpro 386s

Printer:

Hewlett-Packard PaintJet

Scanner:

Saba Page Reader

Electronic Typewriters:

Canon S-68S
Olympia Compact 3
Panasonic KX-R350
Smith Corona XD-7500
Xerox MemoWriter

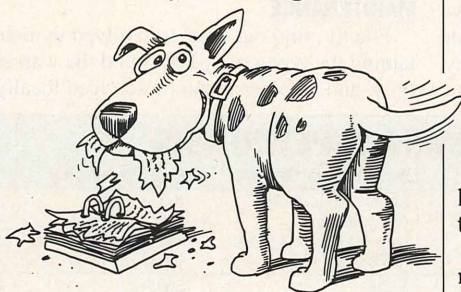
MARTIN BIHL is a freelance writer living in Tarrytown, New York.

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It happens to everybody. Even people who keep accurate notes don't always know where they keep them.

In fact, most of us are so busy that important phone numbers can end up scribbled on matchbook covers, crumpled envelopes or pay stubs. And the one thing we forgot to put in the briefcase last night is the list of things to do this morning.

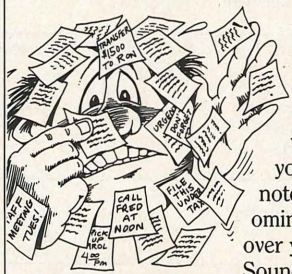
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The truth about executive search.



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- Powerful. File size up to 32MB, limited only by your disk size.
- Generous. Needs only 88K of RAM.
- Instructional. Comes with free informational databases, including DOS help.
- Easy. 17 commands manage everything and they're always onscreen.
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Requires IBM PC/Tandy® or compatible. PC DOS 2.0/MS® DOS 2.0 or later. 256K recommended. Requires 88K of RAM (33K with EMS.) Not copy protected.

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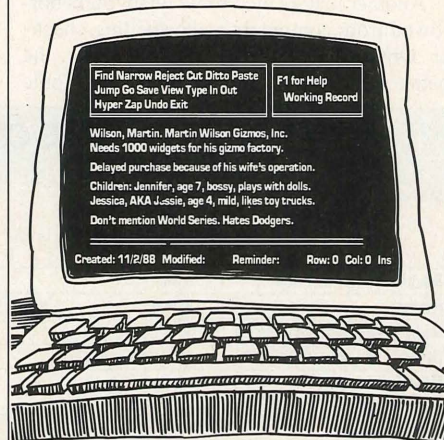
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"Lightning fast" *Syndicated columnist Bob Schwabach*

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65HCM

Canon offers extra memory as an option for the S-68S; see the chart for more details.

Electronic typewriters also have a secondary memory, used for correcting mistakes. As you type characters, they are placed into the correction memory. If you discover a mistake, the correction memory will remember the characters and the typewriter automatically erases as many letters as you specify. The Canon, Panasonic, and Xerox typewriters each have only a one-line correction memory while the Smith Corona XD-7500 has enough memory to correct 10 lines.

A battery stores the contents of the memory when the typewriter is unplugged. In most cases, a fully charged battery will last 30 to 90 days.

SPELLING CHECKERS

Another feature electronic typewriters borrowed from computers is the spelling checker. Obviously, the larger the dictionary, the better the spelling checker. The Panasonic



Canon's S-68S recognizes 90,000 words.

KX-R350 has the smallest dictionary with only 63,000 words while the 90,000-word spelling checker in the Canon S-68S is the largest.

No matter how large the main dictionary, there are many words—technical terms, for instance—that aren't included. That's why the spelling checkers come with room for

personal dictionaries that you can tailor to your needs.

SPEED AND WIDTH

Two other features to consider are print speed and paper width. The print speeds of the five typewriters range from a high of 15 characters per second for the Xerox Memowriter and Olympia Compact 3 to a low of 12 for the Panasonic KX-R350. Print speed is only important when printing out a stored document. Unless you type over 140 words per minute, none of these five typewriters will slow you down.

Also, all five typewriters accommodate letter-size paper inserted sideways, and the Olympia Compact 3 will accept paper up to 15 inches wide.

MAINTENANCE

Finally, find out what is involved in maintaining the typewriter, how good the warranty is, and whether it can be serviced locally.

A SIDE-BY-SIDE COMPARISON OF FIVE ELECTRONIC TYPEWRITERS

	Canon S-68S	Olympia Compact 3	Panasonic KX-R350	Smith Corona XD-7500	Xerox Memowriter
Manufacturer	Canon USA, Inc. One Canon Plaza Lake Success, NY 11042 (516) 488-6700	Olympia USA, Inc. Box 22 Somerville, NJ 08876 (201) 231-8300	Panasonic Industrial Co. One Panasonic Way Secaucus, NJ 07094 (201) 348-7000	Smith Corona Corp. 65 Locust Ave. New Canaan, CT 06840 (203) 972-1471	Xerox Corp. P.O. Box 1600 Stamford, CT 06904 (203) 329-8700
Suggested Retail Price	\$400	\$539	\$340	\$429	\$695
Rating	★★★	★★	★★★★	★★★★	★★
Daisy-Wheel Size (characters)	96	100	96	96	96
Number of Optional Wheels	10 (\$15 each)	8 (\$18 each)	5 (\$20 each)	11 (\$14 each)	10 (\$27 each)
Print Speed (pica characters per second)	14	15	12	12	15
Pitch	10, 12, 15	10, 12, 15	10, 12, 15	10, 12, 15	10, 12, 15
Paper Width (max. inches)	14	15	12	13	13.2
Typing Width (max. inches)	11	11.5	10	11	11.2
Ribbon Cassette	Correctable (\$4.50), multistrike (\$5.50), or fabric (\$5.50)	Correctable (\$5), multistrike (\$8), or fabric (\$8)	Correctable (\$6) or fabric (\$6.50)	Correctable (\$5) or multistrike (\$8.50)	Correctable (\$39 for six ribbons)
Correction Type	Lift-off or coverup	Lift-off or coverup	Lift-off	Lift-off	Lift-off
LCD Display (characters)	31	20	30	40	29 plus 11 for prompts
Memory Capacity (characters)	6,000	12,000	12,000	12,000	15,000
Correction Memory	One line	300 characters	One line	10 lines	One line
Spelling Checker (words)					
Main	90,000	Optional (\$105) 80,000	63,000	75,000	Optional (\$150) 70,000
User	100	300	120	300	300
Automatic Functions	Paper feed; carriage return; bold; underline; centering; right margin justification; paragraph indent; decimal, center, and right tab	Paper feed; carriage return; bold; underline; centering; right margin justification; paragraph indent; decimal, center, and right tab; relocate	Carriage return; bold; underline; centering; right margin justification; paragraph indent; decimal tab; relocate	Paper feed and eject; carriage return; bold; superscript; subscript; underline; centering; right margin justification; paragraph indent; decimal, center, and right tab; relocate	Paper feed; carriage return; bold; superscript; subscript; underline; centering; right margin justification; paragraph indent; decimal tab; relocate
Features	None	File copy, delete, insert, and store; bidirectional printing; impression control; memory quantity display; word search; forward and reverse indexing	Block move; bidirectional printing; memory quantity display; word search and replace; word wrap; forward and reverse indexing	Block copy, delete, and move; file insert; bidirectional printing; draft copy; impression control; word search; forward and reverse indexing	Line framing; word search and replace
Options	RAM cartridge (4KB [\$40], 8KB [\$60], or 16KB [\$90]), serial (\$60) or parallel (\$80) interface	Parallel interface (\$95), color ribbons (\$6)	Serial interface (\$80), rechargeable NiCd battery for DC operation (\$45)	Messenger Module (parallel or serial interface) (\$109)	None
Dimensions (inches)	17.9-by-15.2-by-4.9	19-by-16-by-5.5	16.8-by-14.8-by-4.4	17.6-by-15.7-by-4.9	18.1-by-15.5-by-5.1
Weight (pounds)	15.9	20.5	12.8	16.7	17.4
Warranty	90 days parts and labor, one year parts	90 days parts and labor	90 days parts and labor	90 days parts and labor, one year parts	90 days parts and labor

KEY: ○ Poor, ★ Average, ★★ Good, ★★★ Very Good, ★★★★ Excellent

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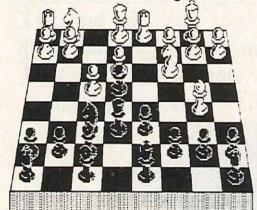
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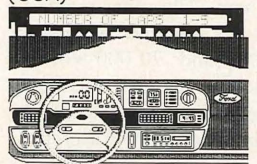
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GAMES

ARCADE GAMES (106) Has Kong, 3-D Pacman, Bricks, Pango. (Requires color.)
BASIC GAMES (107) Pacman, Lunar Lander, Startrek, Meteor, Breakout, and others.
CARD GAMES (109) Canasta, hearts, draw poker & bridge.
STRIKER (110) Defender-like game. "Top Gun" in space.
FLIGHTMARE (112) Futuristic fighter pilot game. (Requires color graphics adapter.)
SLEUTH (117) Who done it?
DND (119) Like Dungeon and Dragons.
ROUND 42 (120) Better than Space Invaders. 42 levels.
GAMES IN BASIC (124) Lander, biorhythms, desert, Phoenix, Star Wars, others.
QUEST (152) Role playing adventure fantasy game. (Requires CGA.)
SPACE WAR (158) Dogfight in outer space, using phasers, photon torpedoes, etc.
BRIDGE PAL (174) Complete game of contract bridge, with tutorial.
FENIX (193) Just like the famous arcade game.
PINBALL GAMES (197) Pinball, Rain, Twilight Zone, Wizard, etc.
KID-GAMES (GAM8) Animals math, clock game, alphabet, etc.
CHESS (GAM9) Incredible. 2D and 3D. Many levels. Play back moves, store games.



EGA RISK (GAM11) World domination in great color. Includes EGA Asteroids.
PC PRO-GOLF (GAM27-28) Great graphics. Complete 18 hole, 72 par course. (CGA)
PEARL HARBOR (GAM32) Shoot down Jap Zeros before they destroy U.S. Fleet. (CGA)
ULTIMA 21 DELUXE (GAM34) Best Blackjack game around. Includes Video Poker.
FORD SIMULATOR (GAM37) Great driving simulation. (CGA)



MUSIC

PIANOMAN 3.2 (301) Turn your keyboard into a piano.
PC-MUSICIAN (302) Compose, save, and play music.

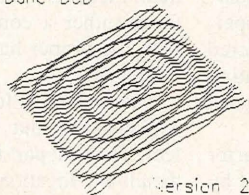
CHRISTMAS SONGS (311) Play your favorites on a PC.

WORD PROCESSING

PC-WRITE 2.71 (401-402) (2 disks) Latest version of this popular program w/spelling checker.
PC-TYPE+ (421-423) (3 disks) Excellent. Includes mail merge, 100,000 word spelling checker. Interfaces with PC-File+, PC-Style.
MAXI-MAX (432) 59 macros to use with Word Perfect 4.2 or later. 11 templates for forms, border designs, etc.

GRAPHICS

KEYDRAW CAD SYSTEM (1001, 1002, 1065) (3 disks) Popular. Also uses mouse. (Requires color graphics - CGA.)
DANCAD 3-D (1051, 1052) (2 disks) Create 3-D graphics. Rotate, magnify, etc. Runs on CGA, EGA, or Hercules.
Danc - D3D



SIDEWAYS (1007) Prints text sideways. Useful for spreadsheets.

SIMCGA/HGCIBM (1027, 1062) (2 disks) Use with Hercules graphics card/compatibles to run programs requiring CGA on your monochrome PC.
IMAGE 3-D (1048) Create and edit 3-D objects. Move, scale, rotate and tip image.
FINGERPAINT (1050) Use keyboard or mouse to draw. Like MacPaint. (Requires CGA or EGA.)

FANTASY (1057) Create flowing graphic images with mouse or keyboard. (CGA.)
FLOWCHARTING (1078-1079) Complete system for flowcharts, organizational, electrical, etc., with symbols.

RELIGION

THE BIBLE (3301-3306) (6 disks) Old Testament, King James version.
THE BIBLE (3307-3308) (2 disks) New Testament, King James version.
WORD WORKER (3309-3310) (2 disks) Bible search program. New Testament, King James version.
BIBLEMAN (3330) Excellent Bible quiz program.

BASIC

PC-PROFESSOR (1401) BASIC tutorial. Good.
BASIC PROGRAM GENERATOR (1402) The menu driven way to write programs.

B-WINDOW (1407) Give windowing capabilities to your Basic program.

UTILITIES

HOMEBASE (2608, 2612, 2613) Complete desktop organizer. Great!
LIGHTNING PRESS (2718) Printshop clone. Includes graphics for many uses.

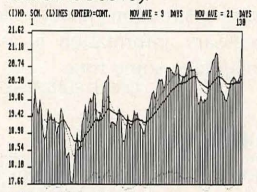
1. GREETING CARD
2. POSTER
3. LETTERHEAD
4. BIRTHDAY CARD
5. PRINTER SETUP
6. EXIT TO DOS



PROFESSIONAL MASTERKEY (2805) Like Norton's. Retrieve deleted files. A lifesaver.
BAKER'S DOZEN (2821) 13 utilities from Buttonware.
AUTOMENU (3003) Make PC menu driven. Incl. passwords.
SCREEN (3006) Save your monitor from screen burn-in.
DOT MATRIX FONTS (3061-3062) (2 disks) Print your text in different fonts. Works with most printers.

ACCOUNTING/FINANCE

MARKET CGA (BUS17) Performs sophisticated analysis on stocks, funds, etc. (EGA version is BUS16).



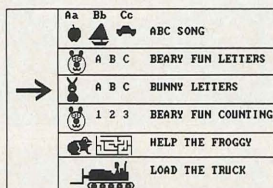
BILLPOWER+ (BUS40) Bill clients for time and materials, advances, retainers, etc. Computes taxes, past due interest, etc. Has full G/L.
CPA LEDGER (706-708) (3 disks) Complete general ledger for corporations, partnerships or sole proprietors.
PERSONAL FINANCE MANAGER (715) Household budget manager. Keep track of checking, savings, investments.
PAYROLL USA (725-726) Up to 2,000 employees in any state. dBaseIII and Lotus compatible. Complete P/R system.
EXPRESS CHECK (786) Check account with running balance, monthly reports, etc. Prints checks.
FINANCE MANAGER II (774-775) (2 disks) For personal or small business financial management.

SPREADSHEETS

AS-EASY-AS (505) Great. Includes screen help menus. Utilizes function keys. A Lotus clone that reads Lotus files.
PC-CALC+ (512-514) (3 disks) Jim Button's famous Lotus clone.

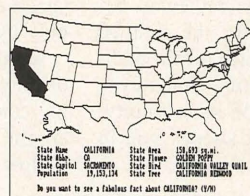
EDUCATION

AMY'S FIRST PRIMER (248) Children's learning game that teaches letters, numbers and keyboard.



AMY'S FIRST PRIMER

FUNNELS AND BUCKETS (201) A fun way to learn math.
MATHPAK (202) Tutorial with lessons in higher math.
PC-TOUCH (204) Learn typing.
BASIC TUTORIAL (208) Learn programming with BASIC.
BEGINNING SPANISH (211) Tutorial.
SPANISH II (232) Sequel.
BIBLEQ (214) Learn the Bible with this Q-A tutorial.
FACTS 50 (239) Geography lessons for U.S. Nice graphics.



APPLICATIONS

FORM LETTERS (1907) Commonly used form letters and business applications.
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FAMILY HISTORY (2203-2204) (2 disks) Create files and genealogical reports.
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SPREADSHEET TEMPLES

LOTUS MACROS (601) Save hours of work. (Req. Lotus)
LOTUS SPREADSHEET TEMPLATES (602) Ready-made. (Requires Lotus 1-2-3)
GOAL-SEEKER V3.5 (624) Achieve objectives by changing spreadsheet variables and seeing result. (Requires Lotus.)
LOTUS TUTORIAL (630) Learn Lotus (requires Lotus).

DOS

DOS TUTORIAL (1301) Teaches you to use DOS.
STILL RIVER SHELL (1304) Run DOS commands from a menu. Makes DOS easy.
BATCH FILE TUTORIAL (1305) Utilize batch file processing.
MORE DOS TIPS (1318, 1323) (2 disks) More about DOS.
HELP DOS (1326) On line DOS help with menus. Includes DOS dictionary of terms and a hints menu.

TELECOMMUNICATIONS

Q-MODEM 3.1 (1101, 1102, 1144) (3 disks) Powerful but easy to use. Fast.
RBBS V16.1A (1107-1109, 1150) (4 disks) Multi-user bulletin board system.
PROCOM 2.42 (1112-1113) (2 disks) Hacker's delight. Redial capability. Latest version.

SECURITY/HACKING

COPY PROTECTION I (1219) Instructions for unprotecting commercial software.
COPY PROTECTION II (1220) More software you can unprotect.
COPY PROTECTION III (1221) Additional software to unprotect.
FLUSHOT (1225) Checks software for viruses.

DATABASE PROGRAMS

PC-FILE + 2.0 (801, 805, 837) (3 disks) Rated better than dBase III+ by Consumer Rpts.
PC-GRAPH (802) Create graphics from PC FILE.
FILE EXPRESS 4.0 (803-804) Powerful system. Allows 32,000 records. Sorts up to 10 key fields.
DBASE III+ ROUTINES (851-852) (2 disks) Latest utilities to help you utilize dBase III+

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At 20.5 pounds, the Olympia Compact 3 is a heavyweight.

You'll routinely have to change ribbons and (if you use more than one typeface) daisy wheels. Both should be simple, quick operations. The typewriter should save you time, not waste it.

For major repairs, ask two questions: How long is the typewriter under warranty? What do I have to do in the event of trouble? The warranties on the typewriters reviewed below cover parts and labor for the first 90 days. Two of them cover parts for an additional year. I'm not suggesting you buy a typewriter strictly because of its warranty, but it may be the factor that swings you in favor of one typewriter over another.

Canon S-68S

This 16-pound portable has most of the features that are standard on electronic typewriters. Its best quality is the aforementioned 90,000-word spelling checker. Other features place it right in the middle of the pack: the display, which shows only 31 characters; the personal dictionary, which can hold only 100 words; the one-line correction memory; and the 14-inch paper width.

The 6,000-character memory is the lowest here, and the printing speed of 14 characters per second is average.

The S-68S comes with a lithium battery for the memory, which must be replaced about once a year. The machine will notify you when the battery is getting low.

The manual included with the Canon S-68S is richly illustrated and well thought-out. It is useful both as a tutorial and as a reference once you start using the typewriter.

CIRCLE READER SERVICE 101

Olympia Compact 3

If you're looking for a compact machine that can be moved around easily, look elsewhere. Weighing in at more than 20 pounds, the

Compact 3 may be called a compact, but it is far from it. Beyond its weight, Olympia's offering is something of a mixed bag.

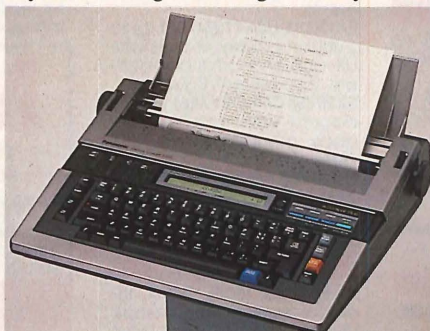
Pluses include an 80,000-word spelling checker, a 300-word personal dictionary, 12,000-character memory, 15-inch paper-width capacity (which is the widest offered by any of the machines here), and a printing speed of 15 characters per second (equaled only by the Xerox MemoWriter).

On the minus side is a paltry 20-character display. Also, some users may be put off by the confusing instruction manual. Although all the necessary information is available, finding it may take some time.

CIRCLE READER SERVICE 102

Panasonic KX-R350

The Panasonic KX-R350 earns four stars for its many features. You can move text around within documents, and from document to document, just as with a word processor. This provides flexibility and makes it easy to create complex documents. You can automatically search for words in documents with the push of a button. The KX-R350 can be hooked up to a computer for use as a printer. Two more pluses are the 12,000-word memory and the lightest weight of any of the



The Panasonic KX-R350 is the lightest reviewed.

machines here, a breezy 12-3/4 pounds.

The KX-R350's manual is a comprehensive work with many visual and written explanations and examples.

Unfortunately, this typewriter is not perfect. The display shows only 30 characters, the maximum paper width is only 12 inches, and the printing speed is a rather sluggish 12 characters per second. The 63,000-word spelling checker and the 120-word personal dictionary are also inadequate. These drawbacks are easily forgotten when you're looking for an inexpensive, lightweight electronic typewriter.

CIRCLE READER SERVICE 103

Smith Corona XD-7500

This typewriter garners four stars for many of the same reasons that the Panasonic KX-R350 does. It, too, allows you to move blocks of text around within documents or from one document to another. The spelling checker has 75,000 words in the main dictionary—not the largest but certainly nothing to sneeze at—and 300 words in the personal dictionary—the largest. Other advantages include the 10-line correction memory (far more than the others) and a 12,000-character main memory. The XD-7500 can be hooked up to either a computer or just a monitor, with the proper hardware. All this in under 17 pounds.

The manual is full of useful drawings and explanations, but it has a slightly cluttered feel. The best part is the center spread, which details the locations of important keys.

CIRCLE READER SERVICE 104

Xerox MemoWriter

The Xerox MemoWriter has the biggest memory (15,000 characters), the biggest display (40 characters), and along with the Olympia Compact 3, the fastest printing



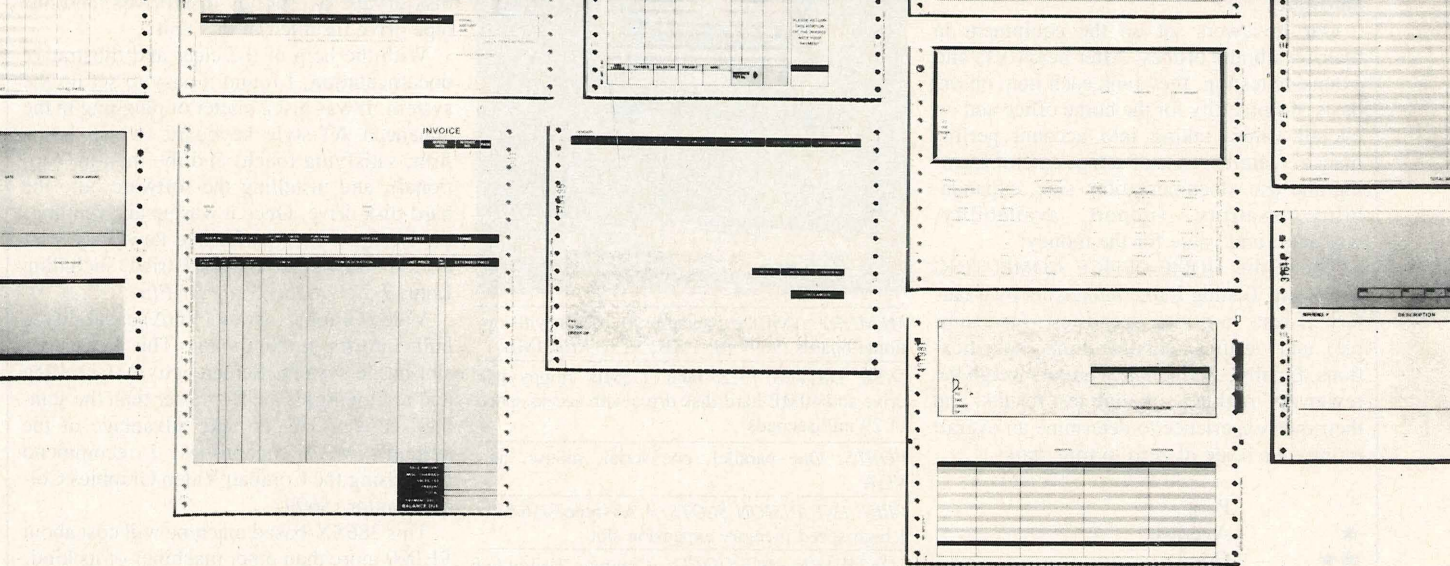
MemoWriter has the largest document memory.

speed (15 characters per second) of all the typewriters reviewed here. The other major features are average: 17.4-pound weight; 13.2-inch paper width; and 70,000-word spelling checker (which is optional on the MemoWriter). The personal dictionary is expandable to 300 words, equal to that offered by the Olympia Compact 3 and the Smith Corona XD-7500.

I especially liked the easy-to-read instruction manual.

CIRCLE READER SERVICE 105

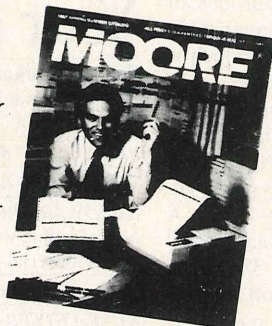
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| <input type="checkbox"/> Open Systems | <input type="checkbox"/> Solomon III |
| <input type="checkbox"/> Multi-Purpose Forms | <input type="checkbox"/> BPI/Computer Associates |

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About Our Reviews and Ratings

Each month, HOME-OFFICE COMPUTING's Hardware Reviews take an in-depth look at new and worthwhile computers, peripherals, fax machines, copiers, phones, and other hardware.

Our reviewers set up the equipment in their own home offices. After heavy use and extensive testing, they rank each item on the basis of suitability for the home office and on overall value, taking into account performance, features, ease of setup, ease of learning and use, documentation, size, expandability/versatility, support, availability, warranty, and value for the money.

Then, the HOME-OFFICE COMPUTING Hardware Testing Lab conducts its own battery of tests (a printer speed test, for example) and verifies manufacturers' specifications. Finally, our technical editors weigh the reviewers' rankings, the lab test results, and their own experience to determine an overall rating on a scale of zero to four stars:

- Poor
- ★ Average
- ★★ Good
- ★★★ Very Good
- ★★★★ Excellent

Note on Hardware Requirements: Any product listed as requiring an IBM PC/XT/AT or compatible should also work with an IBM PS/2 Model 25, Model 30, or Model 30 286.

New 'Mini-386' Makes High- End Power Affordable

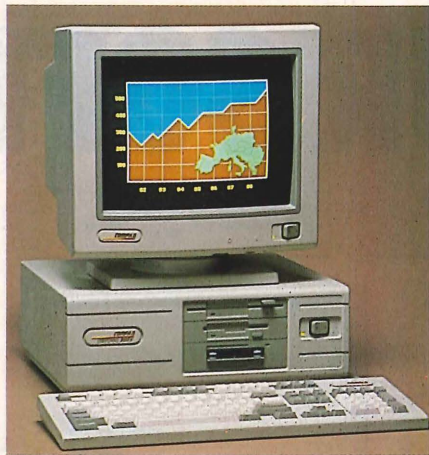
Compaq Deskpro 386s Model 40

Compaq Corp., 20555 FM 149, Houston, TX 77070; (713) 370-0670

RATING: ★ ★ ★ ★

SUGGESTED RETAIL PRICE: \$5,199

MICROPROCESSOR: Intel 80386SX (16MHz); socket for 80387SX (math coprocessor)



MEMORY: 1MB, expandable to 13MB with optional boards (\$699 for 1MB, \$2,699 for 4MB)

DISK DRIVES: 5.25-inch 1.2MB floppy-disk drive and 40MB hard-disk drive with access speed of 29 milliseconds

PORTS: One parallel, one serial, mouse, and VGA

FREE EXPANSION SLOTS: 4 AT-type 8/16-bit, 1 high-speed memory expansion slot

SOFTWARE INCLUDED: Compaq Expanded Memory Manager (CEMM), disk caching, keyboard password

OPTIONS: MS-DOS 3.3/BASIC (\$120), Compaq Video Graphics Monochrome Monitor (\$225), Compaq Video Graphics Color Monitor (\$699)

DIMENSIONS: 15.8-by-5.9-by-14.8 inches

WARRANTY: One year

The Compaq Deskpro 386s (*1988 Editors' Pick*) is the first computer to use the new 16MHz Intel 80386SX microprocessor (386SX for short). The 386SX is compatible with Intel's 80386 microprocessor, which is the brains of all other 386 computers, and can run all 386-based software (for example, Microsoft Windows/386). It's a high-performance alternative to an 80286.

There's a simple reason why systems are being built with this new chip—cost. A 386SX-based computer costs about \$1,000 to \$1,500 less than a comparable 386-based computer. There is a speed trade-off, but for most applications, the difference in speed is negligible.

Compared to previous Compaq models, the Deskpro 386s has a new design and a smaller footprint. You should have no prob-

lem fitting this unit on your desk. What did Compaq leave out of this unit to make it smaller than its predecessors? Nothing. The new design actually accommodates a total of five drives. You can have up to two hard-disk drives, two floppy-disk drives, and one tape drive installed in this unit.

With the help of the clear and illustrative documentation, I found it easy to set up the system. It was just a matter of plugging in the enhanced AT-style keyboard (which has a firm, satisfying touch) and the monitor (optional), and installing the software onto the hard-disk drive. Once it was up and running, the Deskpro 386s performed flawlessly with all the software packages I tried, including Lotus 1-2-3 and XyWrite III Plus.

Video Graphics Array (VGA) capability is built into the motherboard. This frees up a slot in the system. Screen activity (scrolling and redrawing) is swift—faster than the standard IBM VGA. To take advantage of the system's VGA capabilities, I recommend purchasing the Compaq Video Graphics Color Monitor (\$699).

This 386SX-based machine will cost about \$1,000 more than other machines of its kind. You'll be paying for high quality, excellent support, and the Compaq name. If you shop around, you can find the Deskpro 386s discounted about 25 percent.

—STEVEN C.M. CHEN

CIRCLE READER SERVICE 106

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Hewlett-Packard PaintJet

Hewlett-Packard Co., 820 Embarcadero Rd., Palo Alto, CA 94303; (800) 752-0900

RATING: ★ ★ ★ ★

SUGGESTED RETAIL PRICE: \$1,395

HARDWARE REQUIREMENTS: IBM PC/XT/AT or compatible with parallel port and cable; Macintosh with serial port and cable

TYPE: Color thermal ink-jet

NEAR-LETTER-QUALITY SPEED (PICA): 167 cps

GRAPHICS RESOLUTION: 180-by-180 dpi

BUILT-IN FONTS: Courier 10, Letter Gothic 12, Letter Gothic 18



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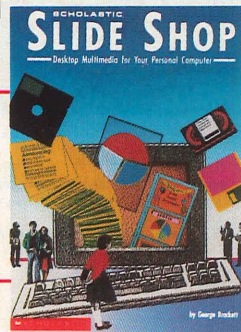
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CIRCLE READER SERVICE 63

HOC 3-89

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HARDWARE

INK COLORS: Black, yellow, magenta, cyan (mixed to produce red, blue, and green)

PAPER WIDTH: 8.5 inches

EMULATIONS: None

DIMENSIONS: 17.4-by-3.9-by-11.9 inches

WARRANTY: One year



The most effective presentations combine graphics, color, and text. Hewlett-Packard's PaintJet brings the power to produce these presentations to your desktop—at an affordable price.

The PaintJet prints seven colors at 180 dots per inch (dpi). And with the appropriate software, the three included colors can be mixed to produce 330 different shades. It prints a full page of text in 30 to 40 seconds, a full page of color graphics in four minutes, and a color transparency in about eight minutes. I printed a business letter with a color graphic logo in about two minutes.

The printing method used by the PaintJet is called thermal ink-jet drop-on-demand. Instead of having a printhead and ribbon assembly (like those found on dot-matrix printers), the PaintJet uses 60 nozzles to transfer ink onto the paper. Each of the two disposable print cartridges, one black (\$28) and one color (\$35), contains 30 nozzles, ink, and the electrical printing elements. Cartridge life is approximately 1,100 pages of black text and 180 pages of color graphics. Because the nozzles can clog, the cartridges must be cleaned regularly. Once the cartridges have been primed and wiped (the process is clearly explained in the user's guide and on a convenient help card), a self-test by the printer quickly shows whether the job was done correctly.

The PaintJet can handle tractor-feed and single-sheet paper, as well as single-sheet transparency film. After trying several different types of paper, I found that HP's Z-Fold PaintJet paper worked best. The ink had a tendency to smear with other brands. Color transparencies come out vibrant on HP's PaintJet Transparency Film. However, you'll have a rather difficult time loading the film into the printer.

The user's guide gives graphic instructions for hooking up the printer to various comput-

ers. It took only a few minutes to hook up the PaintJet to my PC. The on/off, line-feed, form-feed, and top-of-form switches are easily accessible on the top of the printer, and the DIP switches are conveniently located just behind the on/off switch. Since the small external power supply has long cords, it can easily be placed on the floor to decrease desk clutter.

The PaintJet comes with a one-year warranty and a toll-free technical support line. The warranty rather boldly states, "Should HP be unable to repair or replace the product within a reasonable amount of time, customer's alternative exclusive remedy shall be a refund of the purchase price upon return of the product." I get the impression that HP stands behind its product.

Now that I'm used to having high-quality black-and-white and color printing at my fingertips, it would be hard to part with the PaintJet.

—JOEY LATIMER

CIRCLE READER SERVICE 107

Give Your Computer the Power to Read

Saba Page Reader

Saba Technologies, 9300 S.W. Gemini Dr., Beaverton, OR 97005; (800) 654-5274; (503) 641-8520 in Oregon

RATING: ★ ★ ★

SUGGESTED RETAIL PRICE: \$1,299

TYPE: Sheet-fed graphic and OCR scanner

HARDWARE REQUIREMENTS: IBM PC/XT/AT or compatible, 640K RAM and a hard-disk drive

RESOLUTION: 200 dpi

PAPER SIZE: Up to 8.5-by-14 inches

NUMBER OF FONTS RECOGNIZED: 200

SHEET FEEDER: 10 sheets of 20-pound bond

OUTPUT FORMATS SUPPORTED: ASCII, DisplayWrite v.3.0, Lotus 1-2-3, Microsoft Word, MultiMate, PC Paint, PC Paintbrush+, WordPerfect, WordStar

HARDWARE INCLUDED: Interface card and connecting cable

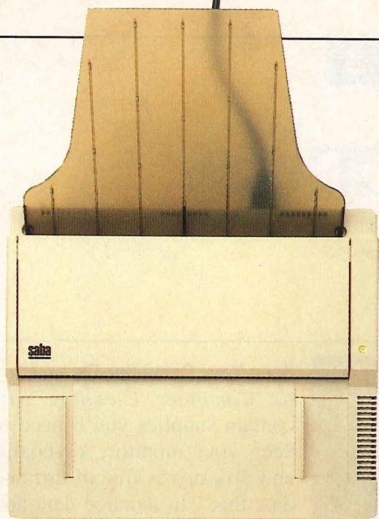
SOFTWARE INCLUDED: Page Reader OCR v2.0

DIMENSIONS: 13.5-by-3.5-by-11.5 inches

WARRANTY: 90 days

Anyone who has ever used a scanner knows how useful it is to scan a graphic into your computer. But imagine how much time you could save if you could also scan text into your computer.

The Saba Page Reader, a full-page OCR (optical character recognition) scanner, lets you scan typed documents, printouts, and images, and save them in popular disk file formats like ASCII, Microsoft Word, Word-



Perfect, WordStar, Lotus 1-2-3, PC Paint, and PC Paintbrush.

Installation is time-consuming but easy. It took approximately two hours to install the Page Reader hardware and software, and successfully scan my first page. A toll-free number is available if you need assistance.

The memory-resident OCR software is easy to use, featuring a pull-down menu system and on-screen help.

The Page Reader cannot scan books, magazines, or other typeset materials because it can't cope with proportional spacing. You can scan most printouts and business documents, as long as they are printed in a typeface supported by the Page Reader software. So, before scanning text, you'll need to choose the typeface you'll be scanning (for example, Courier 10, Letter Gothic 12, or near-letter-quality print from various dot-matrix printers). You must also specify in which file format you want your output, whether it's text or graphics, to be saved (for example, *WordStar* or *PC Paint*). Since the Page Reader does not recognize shades of gray, graphic images of high contrast will be crisp and clear, but images with subtle shading will look a bit ragged.

I scanned text produced by several printers. Instead of selecting the specific style of type I was going to scan, I chose to use Automatic Font Finder. This option challenges the Page Reader to match the text in the scanned document to the various font files on the hard disk. Some printouts utilized typestyles that didn't match any of those supported by the software. In such cases, the Page Reader will select the font most similar to the one being scanned. You can increase the accuracy of the Page Reader if you know in advance which typeface you will be scanning. Correcting any OCR errors is as easy as using your word processor or spreadsheet.

The Saba Page Reader and its accompanying software can save you time and energy if you need documents read into your computer or need to integrate text and graphics into your work. It's a great way to bring the outside world into your computer.

CIRCLE READER SERVICE 108 —JOEY LATIMER

UPCOMING FEATURES IN HomeOffice COMPUTING

APRIL 1989

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MAY 1989

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10 Who Made a Million

Buyer's Guide to
Portable Computers

Is it Time to Incorporate?
Pros, Cons, and Alternatives

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Programs: Software to
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JUNE 1989

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Raising a Family—While
Growing a Business

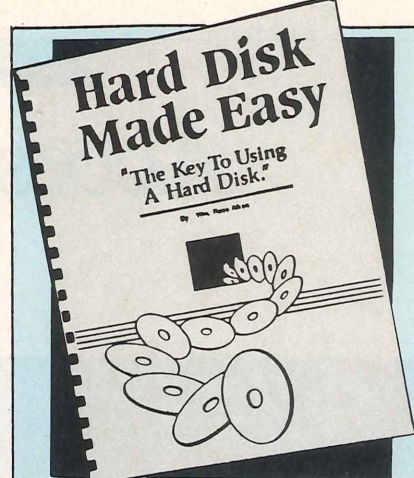
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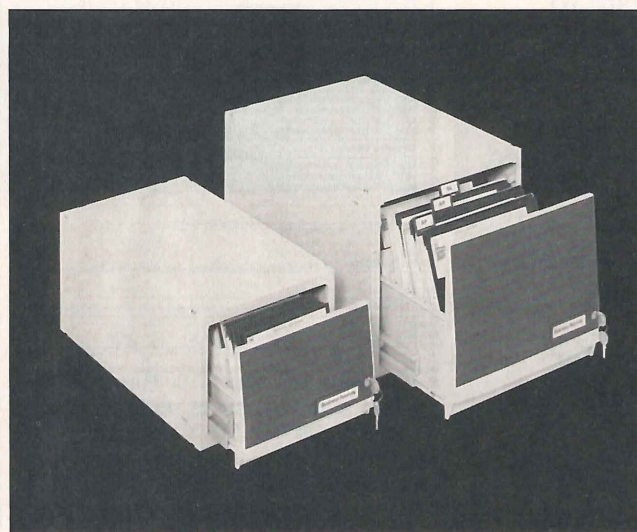
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BY MARIE ALVICH



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CIRCLE READER SERVICE 110

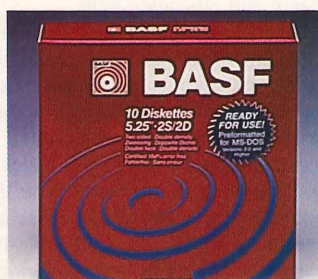


Keep Your Computer Clean. *Curtis Computer Cleaning Kits* contain supplies you'll need to keep your monitor, keyboard, and disk drives free of dirt and dust that can damage data and shorten equipment life. Kit includes a drive-cleaning diskette with head-cleaning solution, screen-cleaning liquid, and pre-treated keyboard-cleaning pads. Available for 3.5- and 5.25-inch floppy-disk drives.

\$20. From Curtis Manufacturing Company, Inc., 30 Fitzgerald Drive, Jaffrey, NH 03452; (603) 532-4123. CIRCLE READER SERVICE 111

Preformatted Floppies. Save time with these 5.25-inch *Preformatted Floppy Disks*. Double-sided, double-density diskettes, formatted for MS-DOS versions 2.0 and higher. \$12 for a box of 10. From BASF Corporation Information Systems, Crosby Drive, Bedford, MA 01730; (800) 343-4600.

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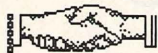


The Benefits Are Threefold. Speed up mailings with this desktop letter-folding machine. Designed to fold letter-size documents into thirds, *Execufold* is perfect for newsletters, flyers, or monthly statements. \$249. From ADI, 20505 E. Valley Boulevard, Suite 112, Walnut, CA 91789; (800) 255-3713; (714) 594-0097 in California.

CIRCLE READER SERVICE 113



Public Domain Software and Shareware for IBM™ and Compatibles, DOS™ 2.1 or higher.
Programs and Utilities to meet all your computing needs.



BUSINESS

- **EZ-FORMS Rev.** D15 (66) - Menu-driven forms generator, misc. skeleton forms.
- **FAST BUCKS V3.18-C** (191) - Menu-driven home finance package
- **EXPRESS CHECK V2.14** (561) - Menu-driven home checking account system.
- **COMPETITIVE SALARY ASSESSOR** (737) - Provides "consensus" salary medians & Assessor adjusted estimates of base salaries for over 2,500 positions as compiled from various surveys.
- **LEGAL FORMS / LETTERS** (611) - 100 types of legal forms & letters.
- **BUSINESS LETTERS** (303 & 304) - (2 disk set) 650 business letters to fit all your needs. Edit w/ any word processor.
- **EXPRESSGRAPH V1.04** (457) - Business graphing in 10 different formats.
- **GEOGRAPHIC ASSESSOR** (735) - Calculates salary & cost of living differences between over 3,000 U.S. & Canadian cities.
- **RENTAL MGR V2.03** (585) - Menu-driven, does credits, debits, reports, handles up to 9604 rental units.
- **MANAGEMENT TOOLS** (643) - 10 programs for managers / supervisors. A mini-management course! Great!
- **PAINLESS ACCOUNTING VC2.50** (774-776) - (3 disk set) A fully integrated menu-driven accounting package.
- **INSTACALC V2.50** (697) - A full power memory resident spreadsheet.



COMMUNICATIONS

- **RBBS BULLETIN BOARD V16.1A** (613-616) - (4 disk set) Turn your computer into a RBBS industry standard.
- **QMODEM V3.1** (293 & 294) - (2 disk set) Full featured modem program.
- **PROCOMM V2.42** (53 & 54) - (2 disk set) Menu-driven modem program; still one of the best.



DATABASE

- **FILE EXPRESS V4.22** (33 & 34) - (2 disk set) Menu-driven database; report generator, many features. One of the best data base programs on the market!
- **PC-FILE + V2.0** (493-495) - (3 disk set) Full-featured database; help screens, menus, macros. Excellent! Buttonware.
- **WAMPUM V3.28** (37 & 38) - (2 disk set) Menu-driven dBase III clone. Knowledge of dBase suggested.
- **INSTANT RECALL V1.64F** (515) - Memory-resident free-form database with its own word processor.



EDUCATION

- **PIANOMAN V4.00** (4 & 5) - (2 disk set) - Turn your PC into a piano, create & edit music. CGA or mono.
- **GRADE GUIDE V3.00b** (118) - A versatile program for storing, retrieving, & analyzing students grades.
- **THE WORLD V2.9 & WEADATA V2.0** (127) - Display maps of the world. CGA, EGA required.
- **FUNNELS & BUCKETS V2.0** (130) - Great learning game; add, subtract, etc. Ages 5-10. CGA / monochrome.
- **AMY'S FIRST PRIMER** (133) - Alphabet, numbers, counting, shapes, matching, etc. Ages 4-8. CGA & Basic required.
- **ANIMAL MATH/MOSAIC** (181) - Count

- objects & graphic learning tool. Ages 4 & up. CGA required.
- **MATH HELPER** (188) - Teaches various math operations. Ages 5 and up. You choose the level. Basic required.



GAMES

- **BLACKJACK GAMES** (95) - 3 advanced blackjack games, multiple players / setup. CGA or Hercules.
- **GAMES OF SKILL** (100) - Contains pool, bowling, & backgammon. CGA required.
- **MONOPOLY V6.7** (106) - Just like the board game. 2 to 4 players. CGA req.
- **LAS VEGAS** (116) - Craps, Roulette, Poker, & more. CGA req. Basic on some.
- **SOLITAIRE** (211) - 4 different games. Nice graphics. CGA required.
- **PLAY N LEARN V2.01** (624) - Contains 7 games designed for kids up to 6 years old. CGA required.
- **SUPER PINBALL** (212) - 5 different games. CGA required.
- **3-D CHESS V1.01** (215) - Excellent chess game. Switch between 2-D & 3-D. CGA or monochrome required.
- **WORDPLAY V1.01** (367) - Wheel of Fortune clone. You provide prizes. CGA required.
- **MINIATURE GOLF** (505) - 18 hole golf course with graphics. CGA required.



GRAPHICS

- **FINGERPRINT V2.00** (282) - Great paint program, easy to use. CGA, EGA, or monochrome.
- **PRINTMASTER GRAPHICS** (319, 549 & 550) - (3 disk set) Over 440 misc. graphics for Printmaster/Plus. Requires Printmaster or Plus. For Printshop Graphics - Order disks # 320, 589, 590 respectively.
- **PC DRAFT II V3.20** (629) - A painting/drafting program most useful for producing clip-art for desktop publishing applications. CGA required.
- **DANCAD 3-D V2.0E** (424 & 425) - (2 disk set) Advanced 2-D/3-D drafting program. Stereoscopic 3-D wire frame animation. Hard drive & 512k req.
- **PC-KEY-DRAW V3.61** (748-751) - (4 disk set) Combines features of a CAD & paint program for power/flexibility. Includes a full graphical database called HYPERDRAW. NEW...



LANGUAGE

- **TURBO 'C' TUTOR V1.50** (489 & 490) - (2 disk set) 14 lesson tutorial learn to program in 'C' language. Works with Borland's Turbo C.
- **'C' LANGUAGE V2.1** (299 & 300) - (2 disk set) Complete programming environment. Source, compiler, samples.
- **ADA TUTOR** (644) - An interactive tutorial for the ADA programming language.



NOVELTY

- **YOUR PERSONAL POET** (718) - Create your own poem from a variety of choices & print it. NEW...
- **HUMOROUS DOS TRICKS** (236) - Various tricks to play on your friends. A must for any joker...
- **CROSSWORD CREATOR V3.30** (422) - Design, solve & print professional looking puzzles. NEW...
- **PC-BARTENDER V2.00** (619) - Recipes for approx. 200 drinks. Search by drink, ingredients, adjust sizes, etc.

- **WEIGHT CONTROL** (586) - Get rid of those unwanted inches / lbs.



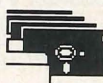
PRINTER UTILITIES

- Multiple fonts with print spooler. NEW...
- **LASERJET FONTS/2** (471 & 472) - (2 disk set) Fonts include: Pica, Old English, Script, & Garamond.
- **LASERJET UTILS/2** (328) - Places 2 pages side by side, convert fonts for Ventura, make graph paper, & more.
- **ON-SIDE V1.01** (560) - A sideways printing program with multiple fonts, up to 175. Great!!!



SPREADSHEET

- **LOTUS LEARNING SYSTEM V2.4** (769 & 770) - Explanations, illustrations, & practice sessions. Tutor. Does NOT require Lotus.
- **QUBECALC V3.02** (591) - A 3-D spreadsheet program, turn rows into columns, import Lotus files, 44 predefined functions, & more.
- **AS EASY AS V3.01F** (302) - Lotus clone. 52 column sheet, graphing, supports functions of 123, 'WKS' files, etc. NEW...



UTILITIES

- **SIM-CGA V4.0** (220) - Great for most programs that need color (CGA) to run.
- **DOS HELP V3.3** (255) - Help screen for DOS commands.
- **DOS TUTORIAL V4.4** (256) - Menu-driven tutorial that teaches DOS commands, terms, etc.
- **PKPAK V3.61 & ARCMaster V2.41** (244) - The complete & fastest archiving/dearchiving program available.
- **PC-DESKTEAM V2.01** (278) - Sidekick like utility plus more features. NEW...
- **AUTOMENU V4.50** (280) - Excellent menu program for your hard drive. Password protection & more.
- **FLU-SHOT PLUS V1.4** (541) - Various programs to protect against trojan horses & the 'virus'. A MUST FOR ALL!
- **LIST V6.2A** (274) - Best utility for viewing documentation. A MUST. for any ASCII file.



WORD PROCESSING

- **GALAXY V2.4** (11) - Easy to use word processor; menus & quick keyboard commands.
- **PC-WRITE V3.0** (784-786) - (3 disk set) Full featured word processor; all the features of the expensive ones. NEW...
- **SAIL TEXT EDITOR V3.0** (376) - A powerful & fast text editor with on-line help screens, & many more features.
- **MAXI-MAX** (669) - Contains over 65 macros & templates for Wordperfect V4.2
- **WORDPERFECT MACROS FOR V5.0** (189) - Contains over 80 macros.



WHAT'S NEW?

- **AMTAX 1988 Version** (428) - Prepare & print complete tax returns for form 1040 & Schedules A - SE.
- **BILLPOWER PLUS V4.1** (794 & 795) - (2 disk set) A timekeeping, billing, & book-keeping program designed specifically for small firms. 350K & hard drive required.
- **PC-PROFIT V3.1** (612) - Business plans and ideas for part-time, or homebased businesses.

- **PC-REVIEWS** (771) - Contains evaluating on many brand name computers, printers, software, books, etc..
- **SERVICE PLUS V2.645** (790 & 791) - (2 disk set) The ultimate maintenance & service call tracking system. 640K & 2 floppy drives required.
- **PCSHIFT V1.01** (798) - An employee time scheduling application where you can schedule employees by dept, or location & by position within each department or at each location.
- **PCLOAN4 V4.07** (799) - Does loan calculations & amortization schedules. Super!
- **DESKJET FONTS / 1** (805) - Contains 10 pt. Roman, Helvetica, Times-Roman, & Script. Included are utilities for downloading & sample printouts. HP Deskjet required.
- **SAILING IN THE BERMUDA TRIANGLE** (757) - A graphics adventure game. Rescue swimmers and rafters stranded in the water. CGA required.
- **SLIMMER V1.0** (815) - This program is designed for you who are a little overweight and are looking for an effortless way to lose a few pounds.
- **VGA PAINT V1.1** (808) - A graphics drawing program that produces screen images in up to 248 colors at once. VGA monitor required.
- **BALLOON SPELLER** (809) - A program for use in the home or school. Play three different spelling games using lists of words you input.
- **BLACKJACK** (810) - A completely accurate simulation of the game Blackjack (21). Included is a thorough discussion of the rules of play, basic strategy, card counting and betting systems.
- **CHARTS UNLIMITED** (812) - Integrates graphics and text processing into one powerful system to allow quick and easy creation, editing and printing of flowcharts, organizational charts, floorplans, electrical diagrams, Gaant charts, forms and many types of charts.



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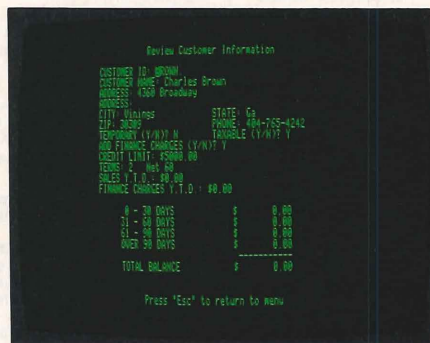
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Plus: An On-Line Telephone Directory and An Integrated Package From WordPerfect

Our reviews of application software use shorthand to describe several of the details associated with any package. This is particularly true under "System Requirements"—where the minimum system configuration is noted—so we have provided the following table of computers for you to refer to as needed. Hardware, software, and memory are required unless noted as "recommended" or "optional." When more than one computer is listed under "System Requirements," the machine marked with an asterisk (*) is the type on which the software was reviewed. Requirements are *not* listed where obvious (for instance, printers with word processors or modems with communications programs). Operating system requirements, such as MS-DOS or the Macintosh System file, are listed only when they're not the standard, minimum requirement (DOS 2.0 for IBM PC or compatibles, System 3.2 for the Macintosh, or ProDOS for the Apple II). For those computer systems that can use both 5.25- and 3.5-inch disks (IBM PC and PS/2 or the Apple II), we've listed only those disk sizes that are either supplied with the software or available at no extra cost from the publisher. Since most productivity software is not copy protected, we have indicated—with the letters "CP"—only those programs that are copy protected. The version listed is the version reviewed; publishers may release subsequent versions at any time.

Designation	Models
128K Apple	Ile/IIf/IIGS (in Ile/c mode) and compatibles
128Ke Apple	Ile (enhanced ROM)/IIf/IIGS(in Ile/c mode)
Apple IIcGS	IIGS only
IBM PC, PS/2	PC/XT/AT, PS/2 and compatibles
128K Macintosh	128K/512K/512Ke/Plus/SE/II
512K Macintosh	512K/512Ke/Plus/SE/II
512Ke Macintosh	512Ke/Plus/SE/II
1MB Macintosh	Plus/SE/II

Ratings Key: ○ Poor; ★ Average; ★★ Good; ★★★ Very Good; ★★★★ Excellent



If your business includes inventory, consider Back to Basics for your accounting.

Back to Basics: Professional

VERSION REVIEWED: 2.0

SYSTEM REQUIREMENTS: 128K IBM PC* or PS/2, 512K Macintosh; two drives (hard-disk drive recommended; required for Macintosh); 5.25- or 3.5-inch (IBM)

PUBLISHER: Peachtree Software, 4355 Shackleford Road, Norcross, GA 30093; (404) 564-5800

PRICE: \$199

OVERALL PERFORMANCE: ★ ★ ★

DOCUMENTATION: ★ ★ ★

ERROR-HANDLING: ★ ★

EASE OF USE: ★ ★

SUPPORT: ○

By automating the more mundane aspects of small-business bookkeeping, accounting programs have given businesspeople greater control over their enterprises. One such accounting system, *Back to Basics: Professional* (BTB), takes a lot of the sting out of keeping journals, balancing books, and figuring out how much is going to Uncle Sam.

BTB was written for people with accounting knowledge. If you're a bookkeeping newcomer, you'll need to bone up on journal entries, posting, balance sheets, cost of sales, equity, assets, and liabilities. Fortunately, most of this accounting parlance is explained in the comprehensive and example-filled, but dryly academic, manual.

Similar to its competing programs, BTB is organized into modules: general ledger, accounts receivable, accounts payable, and invoicing. The modules can exchange data and

calculations with the general ledger, but moving among them grows cumbersome, particularly if you don't use a hard-disk drive. It will probably take many hours for you to set up the program, because you have to organize your data in dozens of expense and income categories.

After setup time, BTB will guide you through the world of accounting with relative speed—that is, if you already know your way around a ledger. For example, if you aren't sure whether to enter an item in the journal or the ledger, it might take you a while to figure out the right spot. The software doesn't make for a smooth journey if your grasp of bookkeeping is fuzzy from the start.

The Chart of Accounts section acts as a valuable index, a sort of home base. It tells you where your assets, liabilities, revenues, and other particulars are located within the program. Getting a balance or subtotal of those items is easily done.

Since BTB is anything but basic, it requires more support than simpler software. But when I called the publisher's toll-free technical support line, I found that the only thing toll-free was the phone call. Peachtree charges a minimum of \$20 for support (\$1 per minute)—if you can get through. The several times I called, I was greeted by a busy signal, put on hold for several minutes, and got a voice-mail messaging system. I didn't mind the fee too much; many software houses must charge for support because otherwise they would lose money on it. But what irritated me about Peachtree is that it required me to give my American Express number before calling me back. On top of that, Peachtree *didn't* call me back. I had a serious problem with the program—I couldn't get two of the modules to work on the Leading Edge computer I was using (although they worked fine on a Compaq). I needed support and didn't get it; I was also prepaying for service I never got.

Despite the support *faux pas*, I find BTB to be a comprehensive package that delineates expenses, income, and profit-and-loss statements down to the nth detail—although I wish it offered some sort of integration with a tax or investment module. Still, this package is valuable to the meticulous bookkeeper. For example, BTB will give you a month- and year-to-date profit-and-loss report.

Back to Basics is best suited for a business that requires detailed accounting, such as firms with several types of inventory. For a service-oriented home office or a small business with just a handful of products, it might be too much to handle. —JOHN F. WASIK

BankMate

VERSION REVIEWED: 3.0

SYSTEM REQUIREMENTS: 256K IBM PC or PS/2; one drive (hard-disk drive optional); mouse optional; DOS 2.1 or higher; 5.25- or 3.5-inch

PUBLISHER: Practical Software, Inc., 131 N. Garden Ave. North, Clearwater, FL 34615; (813) 447-3100

PRICE: \$30

OVERALL PERFORMANCE: ★ ★ ★ ★

DOCUMENTATION: ★ ★ ★

ERROR-HANDLING: ★ ★ ★

EASE OF USE: ★ ★ ★ ★

SUPPORT: ★ ★ ★

MoneyMate

VERSION REVIEWED: 3.0

SYSTEM REQUIREMENTS: 256K IBM PC or PS/2; two drives (hard-disk drive optional); mouse optional; DOS 2.1 or higher; 5.25- or 3.5-inch

PUBLISHER: same as *BankMate*

PRICE: \$70

OVERALL PERFORMANCE: ★ ★ ★

DOCUMENTATION: ★ ★

ERROR-HANDLING: ★ ★

EASE OF USE: ★ ★ ★ ★

SUPPORT: ★ ★ ★

With financial software, especially for small businesses, less, as the saying goes, can really be more. The less a program requires us to do, the more we're going to use it. And the more we use it, the more good it actually does.

That's what makes *BankMate* and *MoneyMate*—two companion finance packages—so appealing. Neither takes very much, if any, learning. They are free of confusing accounting jargon. The manuals give extensive help. And the programs are so well structured, the command systems so comfortable, the screen layouts so clear, that making day-to-day entries can be almost enjoyable.

BankMate is a checkbook program augmented with useful extras like credit-card and cash-activity registers. Its big brother, *MoneyMate*, is a full-fledged personal-finance system that will handle just about anything short of extensive inventory, in-

voicing, and payroll—it works exactly like *BankMate* for checking, but does much more.

BankMate. A little effort will take you a long way with *BankMate*. Its scope is definitely limited, but if your home business isn't too complicated, this flexible package might be all you need.

To start off, you create a list of up to 100 categories for tracking income, expenditures, and "special" transactions (such as transfers of funds between accounts). Income categories could, for example, include Sales, Salary, Interest, and Rents. Expense categories might contain such items as Telephone/Business, Office Supplies, Postage, and Vehicle Expenses.

Next you list up to three bank accounts, enter starting balances, and begin writing checks—handwritten or printed by the computer (sample pin-fed computer checks and order forms for them are included). You can also record charges and credits for up to 15 credit cards, payments by cash, and any undeposited income.

As many as 10 categories can be linked to a single transaction. For example, for a \$100 phone bill, you can allocate \$25 to Telephone/Personal and \$75 to Telephone/Business. This feature is especially helpful in a home office, where many people deduct por-

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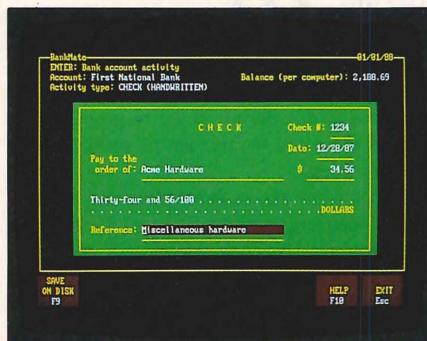
tions of rent and utility bills. *BankMate* will keep mortgage interest and principal categories separate, even though you pay both with one check. And it can be used for recording withheld FICA and federal, state, and local taxes from your own or an employee's payroll checks, a process the manual explains in detail.

At the end of the tax year, you can call up a report that summarizes income and expenditures by category. Print out the report, hand it to your tax preparer, and—presto!—what used to take several nights of agony is done in an instant.

You can predefine deposits, checks, and other common entries, and, almost effortlessly, not only pay your bills and keep your bank accounts straight, but also track complicated category allocations without thinking about it. *BankMate* even has a pop-up calculator for working with raw figures that automatically inserts a calculated result.

My only serious complaint is the program's backup procedure. If you have a hard disk as I do, the program instructs you to use the DOS Backup command for the entire *BankMate* directory. Although the friendly fellow who answered the telephone-support line (free for 90 days) suggested a simpler alternative of copying only a few files, I wish the manual and help screens had provided those file names.

Otherwise, *BankMate* is a delight. Its greatest shortcoming is that it's too limited for anyone who has more than the most elementary business needs. But that may also be its greatest advantage. There's nothing to distract you from the most important task—making those day-to-day entries of income and deductible expenses.



BankMate gives you on-screen checks; just enter the needed information and print.

MoneyMate. Despite a dazzling array of extras, this powerful personal-finance package retains the straightforward structure that makes *BankMate* so easy to use. The same concise on-screen instructions lay out all options at all times, so even though there's a lot to *MoneyMate*, it takes little time to learn.

The categories and banking work exactly

the same as *BankMate*; in fact, you can upgrade directly from *BankMate* if you outgrow it. But *MoneyMate*'s enhancements allow for 200 categories, 10 bank accounts, and 25 credit cards. Also, unlike *BankMate*, it balances credit-card accounts and tracks assets and liabilities, budget performance, and more.

The expanded bill-paying feature is one of *MoneyMate*'s most useful aspects, and it's a good example of how well-integrated and adaptable the whole program is. You predefine bills as either one-time or repeating, fixed amount or varying. Then you indicate how often they come up (weekly, monthly, or quarterly for instance), and keep a list of bills due that updates every time you pay.

This means that for many items like rent, utility bills, and mortgage payments, you have to write out the full entry only once (*BankMate* has a similar feature, only not as extensive). After that, when writing an on-screen check, you press one key to access the bill file and then type the first letter or two of the payee's name. The whole entry is written out, the transaction categorized; and your bill list, credit-card accounts, and net worth (if you choose) are automatically updated. Deposits, electronic transfers, and cash withdrawals—which work the same way—can also be predefined.

The assortment of other features is too

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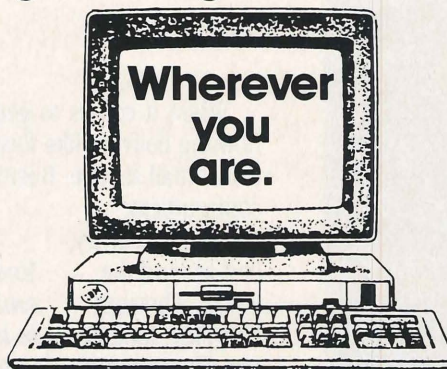
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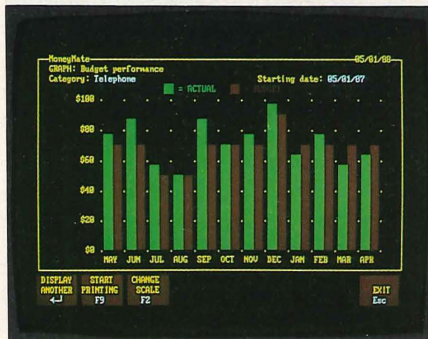
numerous to list, but here are a few: You can track receivables (money people owe you—a good invoice substitute for some freelancers), securities and commodities, real estate, life insurance, installment debt, vehicle loans, mortgages, and unpaid taxes. Once you've listed your assets and liabilities, you can call up reports and graphs of net worth, profit/loss statements for your securities and commodities, and a numbered inventory of your personal property (great for insurance records). You can coordinate all this information with a budget worksheet to come up with graphs and reports that compare your proposed budget to actual spending.

For those who want to stop going crazy at tax time, *MoneyMate* sorts transactions not just by category, but also by special tax codes. So, you get a report of income and deductible expenditures grouped according to which IRS or state tax form they apply: 1040, Schedule A, Schedule C, and so on.

I was impressed by *MoneyMate*'s sensible and thoughtful design, timesaving touches such as the ability to jump easily between the check-writing and asset-and-liability modules. Although you still have to make the entries in order to reap the benefits, the program is intelligently structured, so that a little work in advance will save you loads of time as you go—especially if you have a tax preparer help you set up categories and tax

codes, as the manual advises. Although the manual has several deficiencies, it includes an excellent glossary, good explanations of some tricky accounting procedures, and helpful lists of optional categories.

I wish I could stop here, because I love *MoneyMate*, but there are a few problems I must mention.



With *MoneyMate*, you can graphically compare actual expenses to your budget.

While *BankMate*'s documentation is very good, *MoneyMate*'s has some real flaws. For example, to get the program to work, you have to check and possibly edit your CONFIG.SYS file. Although instructions are given, and a file you can copy is included, not all possible scenarios are covered (mine wasn't). The helpful phone-support person

gave me good step-by-step advice, as well as clear answers to all my other questions; but a truly top-notch program would have provided full information in the start-up guide. There were other annoying omissions in the manual, and one or two help screens containing the word "self-explanatory"—which I found especially irritating, since I didn't understand.

The program's error-handling was also uneven. For instance, it always stops you before you exit without saving or erase something important. However, by changing a check number without first voiding the check, I was able to trick it into inaccurately recording a credit-card payment. One look at the credit-card register let me know I had a problem. A little trial-and-error fixed it, but the manual didn't anticipate this mistake and had no instructions for how to correct it.

In short, *MoneyMate* is a terrific program that, with a little polishing, could really shine. At its best, it packs much power into a format so accessible that even people who hate bookkeeping can use it with ease (dare I say pleasure?). If the creators would make a few additions to the manual and replace every "self-explanatory" in the help screens with real explanations, it would be just about impossible to beat. —LISA KLEINHOLZ



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PC Yellow Pages

VERSION REVIEWED: 1.0

SYSTEM REQUIREMENTS: 512K IBM PC or PS/2; hard-disk drive or high-density floppy (1MB storage); modem (for autodial); mouse optional; color monitor optional; 5.25- and 3.5-inch

PUBLISHER: Digital Publications, Inc., 5390 Peachtree Industrial Blvd. #105, Norcross, GA 30071; (404) 448-6837, (800) 777-1470

PRICE: \$100

OVERALL PERFORMANCE: ★ ★ ★

DOCUMENTATION: ★ ★ ★

ERROR-HANDLING: ★ ★ ★ ★

EASE OF USE: ★ ★ ★ ★

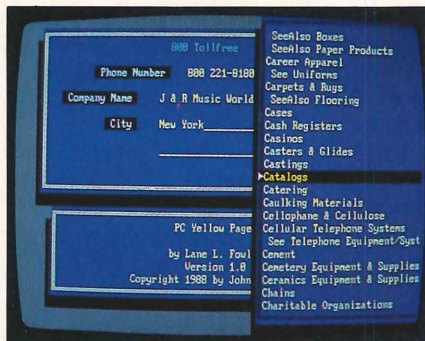
SUPPORT: ★ ★ ★

I wanted to get the most out of my computer system, so I purchased a modem. Next came a desktop utility that let me use my modem and computer as a telephone dialer. Something was still missing, however—telephone numbers to dial. So when my editor sent me *PC Yellow Pages*—a telephone dialer that comes with comprehensive business telephone listings plus a directory of toll-free numbers of major companies—to review, my system became complete.

I must admit that I was a little suspicious of a product that claimed to provide up-to-date phone listings. After all, it seems as if half of the numbers I call in our local phone book have been changed or disconnected. To my surprise, the *PC Yellow Pages* directory was right on for all of the dozens of listings I called. That's because smaller and newer businesses, those most likely to move or close, aren't included. How small is small? Well, the source of the listings is a database of companies that operate mini or mainframe computers, which may be a limitation for many prospective users. However, I was able to add my frequently called numbers to the database.

Since *PC Yellow Pages* is intended for the business customer, the publisher also offers specialized listings at costs ranging from \$40 to \$200. For example, I could order a list of major software firms for \$150. Someone else might want a list of large hospitals (\$99) or major chemical manufacturers (\$39). One *PC Yellow Pages* customer with a salvage business wanted "everything to do with transportation." He got it—a listing of major trucking and shipping firms, plus the telephone numbers of businesses in other related areas. The cost of such specialized listings is based upon the number of entries.

Timesaving features such as Power Dial and Redial make *PC Yellow Pages* especially attractive to those who feel as if they spend half their time playing "telephone tag." Power Dial lets me select a group of num-



PC Yellow Pages finds phone numbers quickly and dials them automatically.

bers—or an entire category—and then dials each number automatically. As soon as each call connects, an on-screen timer starts. (The program won't automatically save a log of numbers I've called, but the publisher promises that feature in one of its semiannual upgrades.) When I finish a Power-Dialed call, pressing the spacebar resets the timer and dials the next number. If a number is busy, I can decide to redial immediately, after a preset pause, or save the number for later. When I've finished a Power-Dial session, I can scroll through the numbers I didn't reach and try them again.

The real beauty of a computerized phone directory is finding numbers quickly. Instead of paging through four inches of listings, I simply enter the category I want. The program starts searching immediately—when I type C, the cursor highlights the first entry beginning with that letter. Each additional letter narrows the selection. When the category I want is highlighted, pressing Enter calls up that portion of the database. This can take time—on my plain-vanilla PC with a not-so-plain hard-disk drive, getting a list of toll-free numbers for major hotels took about 20 seconds. Still, getting the same information without *PC Yellow Pages* can take considerably longer.

Once I've found the right category, I can view all information for a given listing, including the address and notes I may have added during a previous call. If I want to send form letters to companies listed in *PC Yellow Pages*, I can export the information to programs that accept a comma-delimited ASCII file, as does *WordStar Professional*. *PC Yellow Pages* can also print mailing labels and standard Rolodex cards.

Technical support for *PC Yellow Pages* is free, although the call itself isn't. Digital Publications is a small company, so calls for technical assistance may be answered by the owners/programmers themselves. Complaints and requests are noted for inclusion in later releases.

The manual does a good job of explaining how to use the program, but this software is so easy to use that I hardly needed it. Setup is

easy, with a menu screen showing categories such as PBX codes and modem information. Since all numbers include an area code, the program remembers mine and automatically omits it when dialing local numbers. The program assumes a Hayes-compatible modem.

I don't usually make blanket recommendations, but I'm really tempted in this case. If your business involves a high volume of telephone traffic, and especially if you spend any time at all looking for the names and numbers of the businesses you want to contact, you ought to consider *PC Yellow Pages*.
—TAN A. SUMMERS

WordPerfect Executive

VERSION REVIEWED: 1.0

SYSTEM REQUIREMENTS: 512K IBM PC or PS/2; two 360K drives or one 720K drive; 5.25- and 3.5-inch

PUBLISHER: WordPerfect Corp., 329 N. State St., Orem, UT 84057; (801) 225-5000

PRICE: \$249

OVERALL PERFORMANCE: ★ ★ ★ ★

DOCUMENTATION: ★ ★ ★

ERROR-HANDLING: ★ ★

EASE OF USE: ★ ★

SUPPORT: ★ ★ ★

A good integrated package offers two main advantages over independent programs that perform the same functions: All the modules use similar menus and command structures, which means less learning time; and moving information from one module to another is much simpler. *WordPerfect Executive*—an integrated package that caters to those with modest needs by combining scaled-down versions of several WordPerfect Corporation products—scores high on both counts.

The program's simplified version of *WordPerfect*—one of the most popular and capable word processors on the market—makes it immediately attractive. You also get a spreadsheet based on *PlanPerfect* and modules derived from the *WordPerfect Library*: an appointment calendar, a phone directory, note cards, and a calculator.

Whenever possible, all the components use the same command structure that has helped make *WordPerfect* so successful; you perform all operations by pressing the function keys alone or in combination with Control, Alt, or Shift. When necessary, a function key will call up a brief menu of options for that particular feature. This means memorizing a good-size repertoire of function-key combinations—a task made easier, however, by keyboard templates, copious on-screen help, and a well-thought-out tutorial.

Moving from one module to another is made easy by the *WordPerfect Executive* shell, which, with its customizable menu, lets you select any module and add other

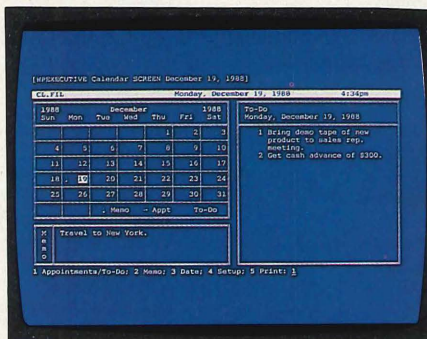
programs to the menu. You can also shift immediately from one module to another by pressing various letter keys in combination with Alt. If you want to move data from one module to another, you just copy it to the *Executive's* clipboard.

The modules' features are aimed at people who want to turn out letters and memos, maintain a simple budget, and keep a to-do list. Those with laptop computers may especially benefit from *Executive*. The word processor lacks many capabilities—such as automatic hyphenation, footnotes, indexing, subscripts, superscripts, and a thesaurus—that most professional writers need, although it gives you a respectable amount of control over elements such as margins, centering, page numbering, and simple headers and footers. A mail-merge feature helps you generate form letters using addresses in the phonebook database. There's also a flexible spelling checker with a 50,000-word dictionary.

Executive's spreadsheet is versatile when it comes to moving or copying cells or blocks of cells and incorporating formulas into them. It gives you a good selection of arithmetic, financial, and date-processing functions to use in formulas, although it omits about 40 percent of the functions available in *PlanPerfect*. You can easily generate a sim-

ple bar graph from your data and copy it into a word-processing document; but the trade-off is that it only approximates the values. You can also move spreadsheets between *Executive* and *Lotus 1-2-3*.

The calendar lets you schedule appointments and keep a to-do list for each day. If you want to be sure not to miss an important meeting, you can set an alarm to beep 10



WordPerfect Executive offers a calendar, word processor, spreadsheet, phone directory, and more.

minutes before a scheduled appointment. The to-do list will list your tasks in order of priority, and will automatically carry over unfinished tasks from a previous day.

You can store names, addresses, and

phone numbers with the phone directory. Just by typing the first few letters, you can move quickly to any name in the alphabetized list. The notecard module works the same way, except that it stores miscellaneous text notes alphabetized by subject headings. A calculator completes the *WordPerfect Executive* lineup.

Graphic and communication modules are not to be found in *WordPerfect Executive*. If you foresee a need for one or both of these functions, you might want to think twice before you buy it.

One of the package's strongest selling points is a feature available in all the modules—a macro capability that lets you record any sequence of keystrokes and then execute them automatically. Creating macros couldn't be simpler, since the macro generator records your keystrokes as you use the program.

A consistent and logical command structure, the ease with which you can move information from module to module, and the simple yet powerful macro capability make *WordPerfect Executive* a winner. And if you should outgrow the limitations of any of its components, you can move up to one or all of the full-featured applications programs without having to relearn all of the commands.

—ROBERT KENDALL

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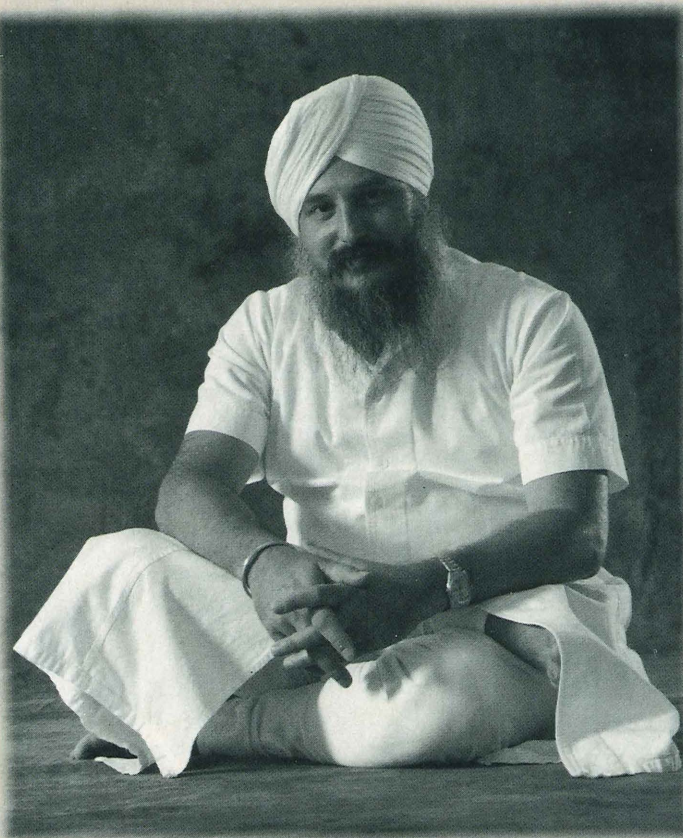
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	<ol style="list-style-type: none"> 1. Lotus 1-2-3 v2.01 <i>Lotus Development Corp.</i> 2. WordPerfect v5.0 & v4.2 <i>WordPerfect Corp.</i> 3. dBase IV <i>Ashton-Tate</i> 4. Windows/286 v2.10 <i>Microsoft Corp.</i> 5. The Prodigy Service <i>Prodigy Services Co.</i> 6. Sideways v3.2 <i>Funk Software</i> 7. Turbo C v2.0 <i>Borland International</i> 8. First Publisher v2.0 <i>Software Publishing Corp.</i> 9. Direct Access v4.1 <i>Delta Technology Int'l</i> 10. Turbo Pascal v5.0 <i>Borland International</i> 	<ol style="list-style-type: none"> 1. TurboTax 1989 <i>ChipSoft</i> 2. The Print Shop w/Graphics Library <i>Broderbund Software</i> 3. Micro Cookbook <i>Pinpoint Publishing</i> 4. PrintMaster Plus Bonus Pack <i>Unison World</i> 5. Managing Your Money v4.0 <i>MECA</i> 6. Print Magic <i>Epyx</i> 7. Dinner at Eight <i>Rubicon Publishing</i> 8. Address Book Plus, Sr. <i>Channelmark Corp.</i> 9. Calendar Creator Plus <i>Channelmark Corp.</i> 10. News Master II <i>Unison World</i> 	<ol style="list-style-type: none"> 1. Where in the USA Is Carmen Sandiego? <i>Broderbund Software</i> 2. Where in the World . . . <i>Broderbund Software</i> 3. Math Blaster Plus <i>Davidson & Associates</i> 4. Think Quick! <i>The Learning Company</i> 5. Learning DOS v2.0 <i>Microsoft Corp.</i> 6. Reader Rabbit <i>The Learning Company</i> 7. Where in Europe . . . <i>Broderbund Software</i> 8. Math Rabbit <i>The Learning Company</i> 9. Once Upon a Time . . . <i>Compu-Teach</i> 10. Reading and Me <i>Davidson & Associates</i> 	<ol style="list-style-type: none"> 1. Flight Simulator v3.0 <i>Microsoft Corp.</i> 2. F-19 Stealth Fighter <i>MicroProse Software</i> 3. T.V. Game Shows <i>ShareData</i> 4. Test Drive <i>Accolade</i> 5. Grand Prix Circuit <i>Accolade</i> 6. Jack Nicklaus Golf <i>Accolade</i> 7. Hardball <i>Accolade</i> 8. Nerd Perfect <i>VaporSoft</i> 9. Hunt for Red October <i>Datasoft</i> 10. Paperboy <i>Mindscape</i> 	
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	<ol style="list-style-type: none"> 1. Excel v1.5 <i>Microsoft Corp.</i> 2. Word v3.01-v3.02 <i>Microsoft Corp.</i> 3. MacDraw II <i>Claris Corp.</i> 4. PageMaker v3.0 <i>Aldus Corp.</i> 5. Pyro v3.0 <i>Fifth Generation Systems</i> 6. Suitcase II v1.2 <i>Fifth Generation Systems</i> 7. S.U.M. <i>Symantec Corp.</i> 8. Works v2.0 <i>Microsoft Corp.</i> 9. WriteNow v2.0 <i>T/Maker Company</i> 10. MacWrite v5.0 <i>Claris Corp.</i> 	<ol style="list-style-type: none"> 1. Quicken v1.0 <i>Intuit</i> 2. The Print Shop <i>Broderbund Software</i> 3. Dinner at Eight <i>Rubicon Publishing</i> 4. WetPaint/Vol 1 & 2 <i>Dubl-Click Software</i> 5. World Class Fonts!/Vol 1 & 2 <i>Dubl-Click Software</i> 6. Poster Maker Plus <i>Broderbund Software</i> 7. Certificate Maker <i>Springboard Software</i> 8. WillMaker v3.0 <i>Nolo Press</i> 9. Mac Money v3.0 <i>Survivor Software Ltd.</i> 10. ComicWorks <i>Mindscape</i> 	<ol style="list-style-type: none"> 1. Where in the World Is Carmen Sandiego? <i>Broderbund Software</i> 2. Mavis Beacon Teaches Typing <i>The Software Toolworks/EA</i> 3. Reader Rabbit <i>The Learning Company</i> 4. Math Blaster! <i>Davidson & Associates</i> 5. Once Upon a Time <i>Compu-Teach</i> 6. Manhole <i>Mediagenic</i> 7. Kids Time <i>Great Wave Software</i> 8. Type! <i>Broderbund Software</i> 9. Kidtalk <i>First Byte</i> 10. Speller Bee <i>First Byte</i> 	<ol style="list-style-type: none"> 1. Falcon v2.0 <i>Spectrum HoloByte</i> 2. Flight Simulator v1.02 <i>Microsoft Corp.</i> 3. Shufflepuck Café <i>Broderbund Software</i> 4. Beyond Dark Castle <i>Silicon Beach Software</i> 5. Colony <i>Mindscape</i> 6. Tetris <i>Spectrum HoloByte</i> 7. The Toy Shop <i>Broderbund Software</i> 8. Dark Castle <i>Silicon Beach Software</i> 9. The Ancient Art of War at Sea <i>Broderbund Software</i> 10. Leisure Suit Larry <i>Sierra On-Line</i> 	
M A C I N T O S H	BUSINESS	HOME/SMALL BUSINESS	EDUCATION	ENTERTAINMENT	M A C I N T O S H
	<ol style="list-style-type: none"> 1. AppleWorks GS <i>Claris Corp.</i> 2. AppleWorks v2.0 <i>Claris Corp.</i> 3. TimeOut QuickSpell <i>Beagle Brothers</i> 4. Publish-It! v2.0 <i>Timeworks</i> 5. WordPerfect v1.1 & v2.0 <i>WordPerfect Corp.</i> 6. List & Mail <i>Avery</i> 7. TimeOut Thesaurus <i>Beagle Brothers</i> 8. TimeOut SuperFonts <i>Beagle Brothers</i> 9. Geo Publish <i>Berkeley Softworks</i> 10. TimeOut Graph <i>Beagle Brothers</i> 	<ol style="list-style-type: none"> 1. The Print Shop w/Graphics Library <i>Broderbund Software</i> 2. Bank Street Writer Plus <i>Broderbund Software</i> 3. Quicken <i>Intuit</i> 4. Paintworks Plus w/ Clip Art Gallery <i>Activision</i> 5. The Print Shop Party Graphics <i>Broderbund Software</i> 6. The Print Shop Companion <i>Broderbund Software</i> 7. The Print Shop Holiday Graphics <i>Broderbund Software</i> 8. The Print Shop Sampler Graphics <i>Broderbund Software</i> 9. Micro Cookbook <i>Pinpoint Publishing</i> 10. MultiScribe v3.0 <i>StyleWare/Claris Corp.</i> 	<ol style="list-style-type: none"> 1. Where in the USA Is Carmen Sandiego? <i>Broderbund Software</i> 2. Where in the World Is Carmen Sandiego? <i>Broderbund Software</i> 3. Think Quick! <i>The Learning Company</i> 4. Math Blaster Plus <i>Davidson & Associates</i> 5. Where in Europe Is Carmen Sandiego? <i>Broderbund Software</i> 6. Mavis Beacon Teaches Typing <i>The Software Toolworks/EA</i> 7. The Oregon Trail <i>MECC</i> 8. Reader Rabbit <i>The Learning Company</i> 9. Mixed-Up Mother Goose <i>Sierra On-Line</i> 10. Designasaurus <i>DesignWare</i> 	<ol style="list-style-type: none"> 1. Who Framed Roger Rabbit? <i>Buena Vista</i> 2. Wings of Fury <i>Broderbund Software</i> 3. Test Drive <i>Accolade</i> 4. Rampage <i>Activision</i> 5. Hardball <i>Accolade</i> 6. California Games <i>Epyx</i> 7. Chuck Yeager's Advanced Flight Trainer <i>Electronic Arts</i> 8. Paperboy <i>Mindscape</i> 9. King's Quest IV <i>Sierra On-Line</i> 10. Skate or Die <i>Electronic Arts</i> 	
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Putting Parents in the Loop With Kids and Computers

An Interview With Educational Software Designer Tom Snyder

Tom Snyder, founder of Tom Snyder Productions, software designer, teacher, musician, and father of two preschoolers, has spent the last 10 years developing curriculum software to take advantage of his one-computer-per-classroom approach to computers in the schools. Snyder believes that the most important part of the classroom environment is the group, and that a teacher can use a computer to stimulate interaction. Recently, Snyder extended this concept into the home with his latest software series, *Reading Magic*, which establishes a dynamic learning environment between preschoolers and their parents. In an interview with associate editor Karen Kane, Snyder discusses education, computers, and kids, and how parents fit in.

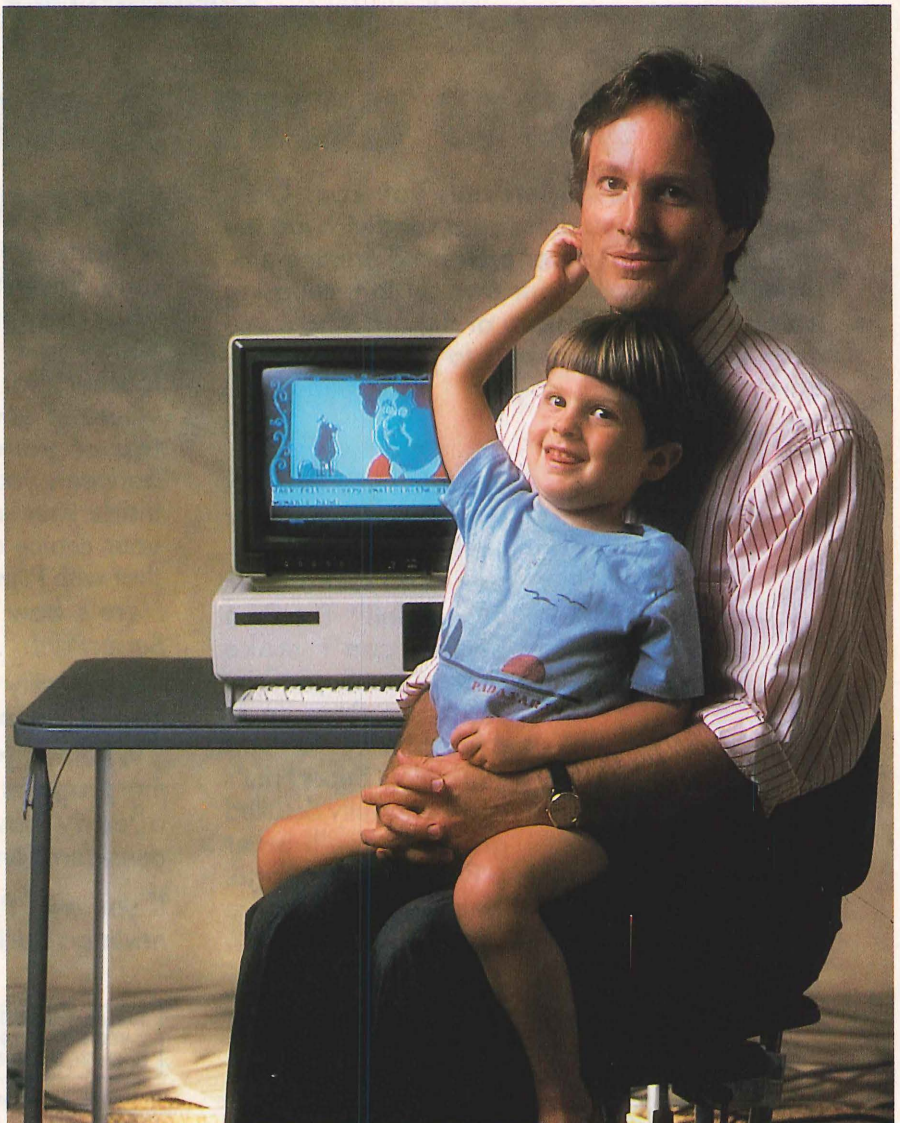
HOC: When did you become interested in computers?

TS: When I was 13, I was kind of a nerd. I was designing computers on paper before microcomputers were a "thing." In 1963 I sent one of my designs to IBM. One day I came home from school and there were crates all over the front lawn filled with thousands of dollars worth of computer components, and a letter from IBM saying, "Remember us when you're older." So I dragged the 200 pounds of stuff to the basement. With my parents' approval, I took a leave of absence from school (basically played sick), built myself a computer, and entered it in the Massachusetts Institute of Technology science fair. I lost to a nun who entered a biology project, of all things.

When I was 14 or 15, I discovered I had no social skills, so I put computers on hold and pursued an interest in music. After college I got a recording contract with Capitol Records and was in a band for about five years.

HOC: How did rock and roll lead to programs like *Snooper Troops* and *Agent USA*?

TS: When my band split up, I started to teach. I taught French (my first love), English, music, and general sciences, and discovered that I could write simple computer programs



Tom Snyder and his son Tim enjoy reading together at the computer. Snyder designed Lapware with both parents and kids in mind.

to help me with my classes. One thing led to another.

HOC: How important is it for a child to have access to a computer?

TS: I think kids should have access to computers, but I don't think they should be encouraged to the point of obsession. One of the best things that computers can offer kids is a simulated world where they can play and

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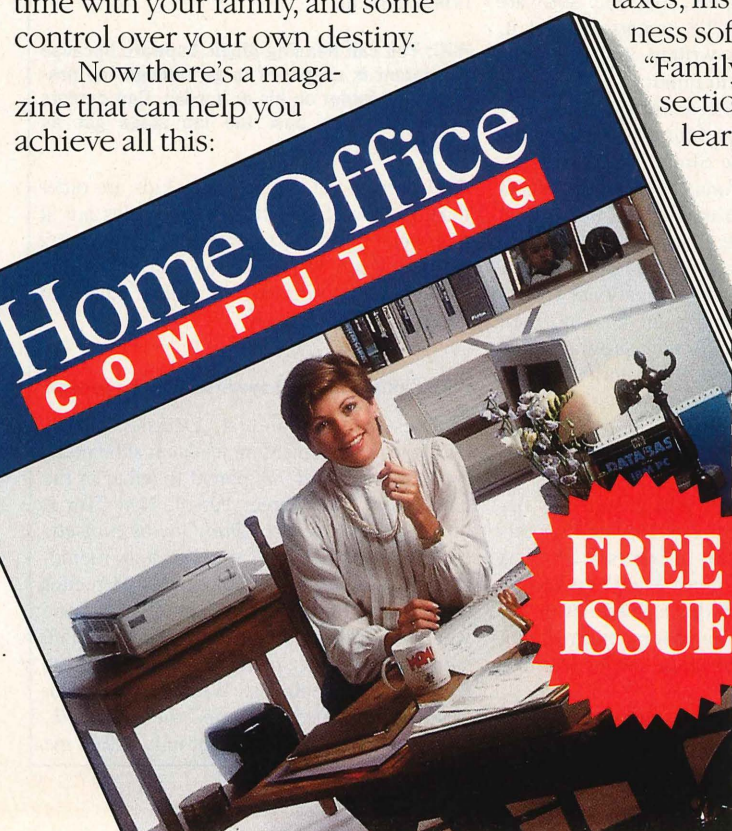
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learn, but that can also turn into a negative thing. I'm a little concerned—I hear parents bragging about how their kids could sit at the computer for only half an hour at first and now they've worked up to two hours. There's a kind of damaged mind-set in our culture that applauds kids for becoming obsessed by the sciences. I think they could learn more about life by walking down the street to get a Popsicle.

HOC: Would you compare using a computer to staring at a television screen for hours?

TS: Because computers are interactive, they're supposed to be better. We call computers interactive because they respond, but that's so weak on the continuum of genuine interaction. One conversation with another child is more valuable than hours of interaction with a computer. It will be great when true artificial intelligence is available, but we're a couple hundred years away from that reality. That's why I'm interested in designing software that is good for two or more kids at a time, or a child and a parent.

HOC: What can a parent do to ensure that his or her child spends valuable time at the computer?

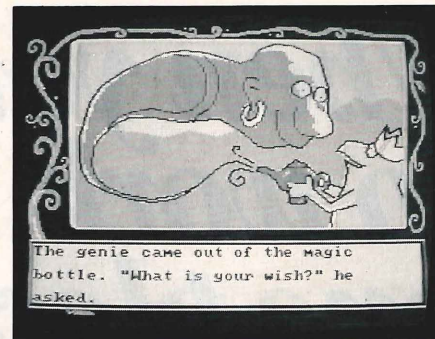
TS: I always get the question "What's the best educational software I can buy for my kids?" I advise parents to find software that they dig the most, as long as it's not really violent or sexist or something, then sit down with their children and learn it together. Parents dislike many of the really trivial exercises for younger kids, but the software doesn't work unless the parents support it. Software should be written with both the parent and the child in mind.

In the *Reading Magic* series, there is a joke for adults every four or five screens. That's why "Sesame Street" is so successful—it's genuinely funny for adults. Parents enjoy watching "Sesame Street" with their kids, and when they watch it together, there's real interaction going on, with the television serving as an educational instrument. Software designers are racking their brains trying to come up with programs that kids can do by themselves—I think they've missed something there.

HOC: Why are groups better?

TS: Kids learn more in group situations because they can get feedback on their thoughts and respond to the ideas of others. There is a theory that says we don't know something until we've said it out loud a couple of times. So someone sitting for hours, internalizing a computer simulation, may not be learning effectively.

When you stare at a computer screen, you often try to keep people away from



Lapware's version of Flodd the Bad Guy provides a magic link between kids and parents.

you—the computer takes so much concentration. I don't think software should interfere with people talking to each other.

In Broderbund's *Carmen* series, the atlas provides a diversion from the computer screen, and an opportunity to speak to people in the room. I think *Carmen* is successful because it is often used by groups of kids. It's more fun doing things with people, and ultimately more educational. Even *PacMan* would be more educational if it froze from time to time, giving players a chance to discuss strategies. With *Earl Weaver Baseball*, for instance, you can press a key any time to freeze the game. Players talk about the game together and then each person sends a secret message to his or her ball players.

I think this same effect can be achieved by putting parents in the loop, and giving them a central and appealing role. And once the dynamic of sharing ideas is established, then the parent can start sneaking in the educational content.

HOC: You call *Reading Magic* Lapware because the parent is supposed to go through the program with junior on his or her lap. Can parents whose kids are past the lap stage get as involved?

TS: I think it gets harder once kids are older than 10. I've found that 10-year-olds are at their peak as intellectual animals. Everything is fascinating. They question everything. It's harder to find software that older kids and parents will both enjoy.

HOC: Can a child use Lapware without a parent?

TS: Yes, but not at first. Decisions about which way the adventure leads must be made by either the child and parent together or the child alone. My three-year-old son Tim is now reading *Flodd the Bad Guy* by himself. He can't actually read yet, but he's memorized it. He sits at the computer and recites the story with the same inflections that I use when reading it to him. So he's learned something—some spelling and perhaps some storytelling techniques. With the next program in the series, *Jack and the Beanstalk*, he's lost without me. He not only needs me

to help him make choices along the way, but the inflection in my voice intensifies the scary and funny parts. He loses interest without me because it's a lot more fun to read it together. And, it's fun for me to listen to his theories along the way. In *Flodd the Bad Guy*, Tim was afraid to take a different course. When there was a choice of whether to take his usual route or try a new course, he would come up with all kinds of great reasons for avoiding the unfamiliar. Total fantasy land.

HOC: How do you feel about software with speech capability?

TS: Software with speech doesn't have the inflection that a parent brings to a story. Also, then there is less interaction between the parent and child.

HOC: Should software used in the home complement what children are learning in school?

TS: It's helpful if kids have the same word processor at home that they are working on at school so they don't have to learn two sets of commands. The word processor is by far the best investment in a personal computer—kids tend to write more with a word processor, and they have fun editing their work.

As far as picking up on what they're doing at school, that really doesn't make sense to me. It's tough for a parent to organize an informal home curriculum with commercial software because there's not enough out there. Many companies market the same product to the home and the school by changing the documentation or adding a teacher's guide. (Sometimes the software works in both realms, but not always.)

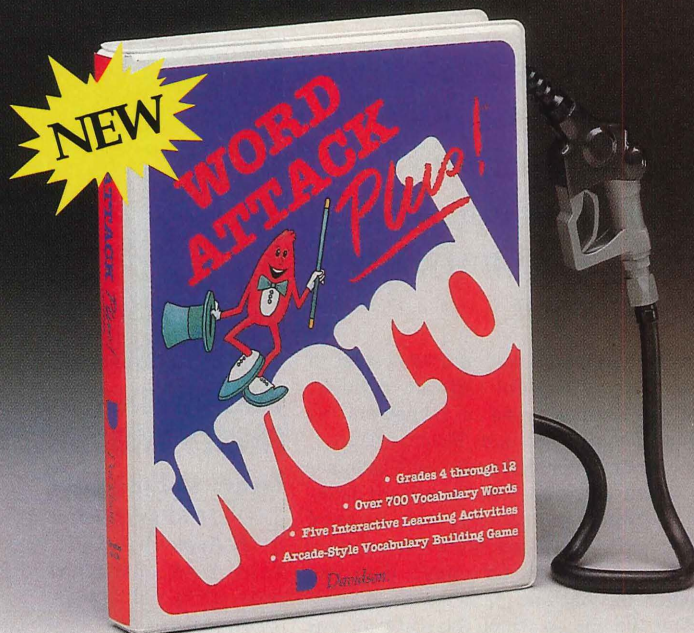
There are a handful of good educational packages introduced each year, but I think that any kind of software kids enjoy is beneficial, whether it complements their schoolwork or not.

HOC: Have parents' attitudes towards computers in education changed in the past few years?

TS: It used to be that Dad would come home from an excited frenzy at the computer store saying, "I've sold the cow, but here are these magic beans." The magic beans were the educational software. He used education as an excuse to buy this new toy, because he couldn't bear to not have a computer.

Now people don't need an excuse to buy a computer, but parents are still hopeful that their kids will benefit from them. Parents still leave the computer store with high expectations—the package descriptions promise all kinds of cool things. In reality the software is usually pretty good but below expectations. I think parents will continue to search for the magic beans. ■

HIGH GRADE FUEL.

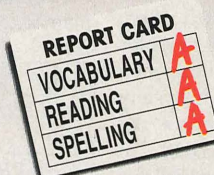
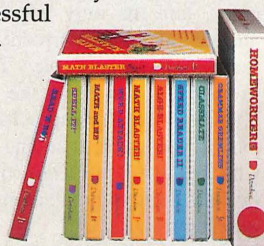


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Davidson. FC 3/89
Teaching Tools From Teachers

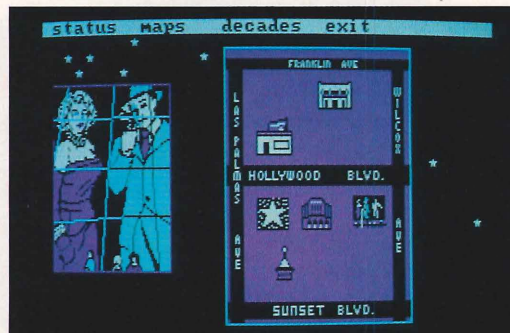
Software for Learning and Leisure

Comprehensive and Capsule Reviews of New and Noteworthy Programs for Education, Family Productivity, and Entertainment

The following ratings key and table refer to full as well as capsule software reviews. Listed are various types of computers, as designated under "System Requirements," and the models included under each designation. When a review lists additional hardware, software, or memory, it is required unless noted as "recommended" or "optional." When a review lists more than one computer, the machine marked with an asterisk (*) is the one on which the software was reviewed. Requirements are *not* listed where obvious (for instance, printers with graphics programs). Operating system requirements, such as MS-DOS or the Macintosh System file, are listed only when they're not the standard, minimum requirement (DOS 2.0 for IBM PC or compatibles, System 3.2 for the Macintosh, or ProDOS for the Apple II). For those computer systems that can use both 5.25- and 3.5-inch disks (IBM PC and PS/2 or the Apple II), we've listed only those disk sizes that are either supplied with the software or available at no extra cost from the publisher.

Ratings Key: ○ Poor; ★ Average; ★★ Good; ★★★ Very good; ★★★★ Excellent.

Designation	Models
512K Amiga	500, 1000, 2000
48K Apple	II/II Plus/IIe/IIc/IIGs (in IIe/c mode)
64K Apple	II Plus/IIe/IIc/IIGs (in IIe/c mode)
128K Apple	IIe/IIc/IIGs (in IIe/c mode)
128Ke Apple	IIe (enhanced ROM)/IIc/IIGs (in IIe/c mode)
Apple IIGs	IIGs only
48K Atari	800/600XL/800XL/65XE/130XE
512K Atari ST	520ST/1040ST/Mega ST
C 64	C 64, C 128 (in C 64 mode)
IBM PC	PC/XT/AT, PS/2 and compatibles
128K Macintosh	128K/512K/512Ke/Plus/SE/II
512K Macintosh	512K/512Ke/Plus/SE/II
512Ke Macintosh	512Ke/Plus/SE/II
1MB Macintosh	Plus/SE/II



Learn facts and legends of motion picture superstars as you explore decades of history in Ticket to Hollywood.

EDUCATION/ FAMILY PRODUCTIVITY

Ticket to Hollywood

SYSTEM REQUIREMENTS: 128K Apple, 512K Apple IIGs, C 64/128, 128K IBM PC, CGA, EGA, or Hercules. 5.25- and 3.5-inch disks (IBM and Apple)

PUBLISHER: Blue Lion Software, 90 Sherman St., Cambridge, MA 02140; (617) 876-2500

PRICE: \$30-\$40

PUBLISHER'S SUGGESTED AGES: 15-adult

COPY PROTECTED: Yes

OVERALL PERFORMANCE: ★ ★ ★ ★

DOCUMENTATION: ★ ★ ★ ★

ERROR-HANDLING: ★ ★ ★ ★

GRAPHICS QUALITY: ★ ★ ★

EASE OF USE: ★ ★ ★ ★

Break out the popcorn! Turn down the lights! You've got a *Ticket to Hollywood*! Movie trivia for the serious cineast comes in a clever game format that teaches while it teases. This game will tickle any movie lover's fancy.

Answering movie trivia questions correctly provides the energy you'll need to take this historical walking tour of Hollywood. Your ultimate goal in *Ticket to Hollywood* is to guess the names of film stars through cryptic clues. The subgoal, however, is to search for the elusive director, who will give you these clues, and the only way to find him is to answer questions correctly. Finding the director isn't always easy. To start, the game provides a lead as to the director's whereabouts—"The Tramp's Table" is an example. If you guess that The Tramp is Charlie Chaplin, and if you know that Sardi's was his favorite Hollywood haunt, you're off to a good start.

Your pursuit of the director will lead you through six walking-tour maps of the Holly-

wood area, but getting to the right place isn't the only challenge. In *Ticket to Hollywood*, "when you are" is just as important as "where you are." As you skip through eight decades, you'll learn that Sardi's was only around from the thirties to the seventies, if you're in the eighties, the map won't show it, so you have to zero in on the right time period as well. The pressure is on, however, because moving from map to map and era to era takes up energy—use too much and the game is over. So you have to continually answer questions to restore your strength. Each time a correct answer is given, you're praised: "Mahvelous, dahling!"

You also receive points for a correct response. As points add up, you get additional leads to the director's whereabouts. And each time you find him, you earn a star. If you can answer his Superstar Question correctly (the director asks questions in addition to giving clues), you'll get three more stars. An accumulation of five stars earns you a newspaper-headline clue to the mystery actor's identity, perhaps "Class President Goes Hollywood," or "I Look Better Now That My Baby Fat Has Settled." If you can't guess, too bad—*Ticket to Hollywood* won't tell. Hint: Once you've narrowed down the star's era and sex, jot down the names of actors as the program mentions them and try them all. (That's how I got Kathleen Turner as the answer for one of the clues above—and I won't tell which one).

If you're really stumped, the company sells an answer guide and backup disk for \$10. Or, you can save the game, do some research, and resume play later. Eight decades and 35 locations will keep you hopping no matter how many times you play, and attractive graphics keep the playing interesting. As for me—I'm off to the video store to rent *One Flew Over the Cuckoo's Nest*. The next time the director ask me to name the nurse, I'll be ready. —TAN A. SUMMERS

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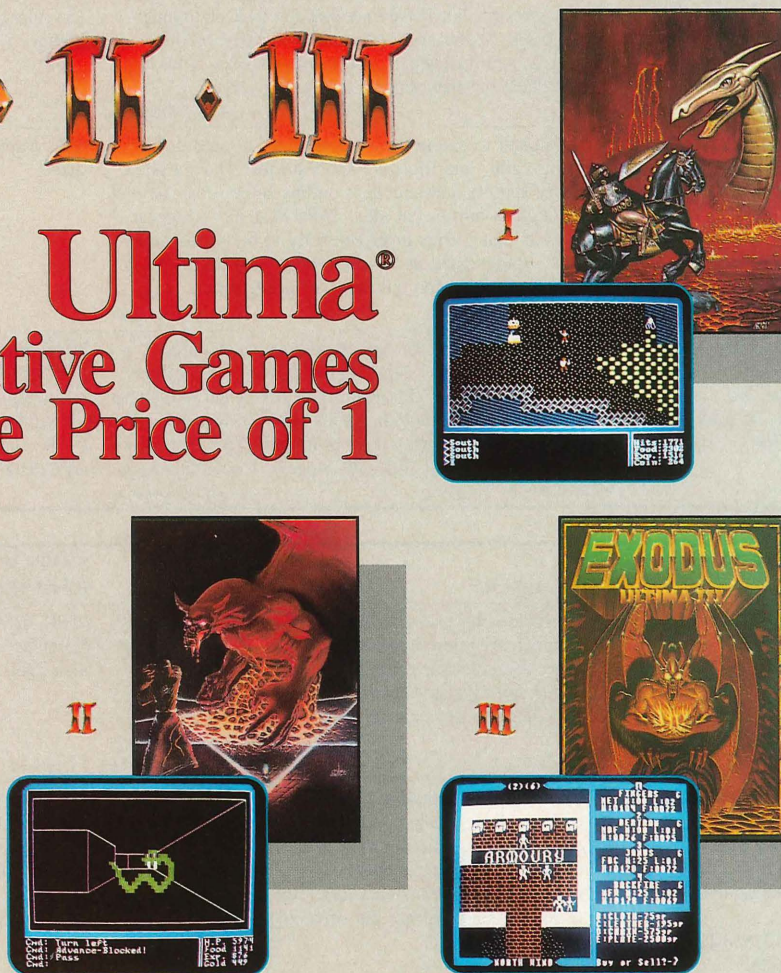
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CIRCLE READER SERVICE 45

CAPSULE REVIEWS

EDUCATION/FAMILY PRODUCTIVITY

TITLE/PUBLISHER PRICE	SUMMARY	SYSTEM REQUIREMENTS	RATINGS					
			CP	O	D	EH	GQ	EU
Crossword Puzzle Generator CEED 13221 Edina Way Poway, CA 92064 (619) 592-9688 \$35	This <i>Crossword Puzzle Generator</i> helps design grids for puzzles, but leaves the difficult task of linking words to fit the grid up to you. An early version (v1.0) had misspelled words and problems with the interface but they have been fixed in v1.2. —Tan Summers	256K IBM PC. CGA or Hercules. DOS 2.11 or higher. 5.25- and 3.5-inch disks.	N	★	★	★	★	★
Story Sketcher MindPlay 100 Conifer Hill Dr. Building 3 Danvers, MA 01923 (508) 774-1760 \$60	Designed to encourage children ages 10 and up to write, edit, and illustrate short stories. The supplied story starters and excellent outline option may be just enough to nurture an idea. <i>Story Sketcher's</i> biggest flaw is that it tries unsuccessfully to be both simple and sophisticated at the same time. Unfortunately, a screen dump is the only type of print format available. —Gwen Solomon	48K Apple. 5.25-inch disks.	Y	★	★	★	★	★
The Perfect Career Mindscape 3444 Dundee Rd. Northbrook, IL 60062 (312) 480-7667 \$40	Looking for a job or contemplating a new career route? <i>The Perfect Career</i> identifies the possibilities based on how an individual rates his or her skills and interests. A report with graphs, job listings, and options serves to narrow down and analyze the choices. A good start to the difficult process of selecting a career. —Lisa Zornberg	128K Apple, 128K IBM PC* with two drives and 80-column card, 256K IBM PC with one drive. CGA, EGA, or Hercules. 5.25-inch disks.	N	★	★	★	N/A	★

ENTERTAINMENT

TITLE/PUBLISHER PRICE	SUMMARY	SYSTEM REQUIREMENTS	RATINGS					
			CP	O	D	PS	GQ	EU
Dolphin Sailing Simulator: Chesapeake Challenge Dolphin Marine Systems, Inc. P.O. Box 188 Downingtown, PA 19335 (800) 367-3622 \$50	A challenging exercise in sailing tactics, this simulation offers hundreds of combinations of voyage, boat type, sail selection, sail set, and wind conditions. Some sailing experience is helpful, but sailing buffs may find the physical feel of the boat lacking. —Karen Kane	256K IBM PC, CGA or Hercules. 5.25- and 3.5-inch disks.	Y	★	★	★	★	★
Jack Nicklaus' Greatest 18 Holes of Major Championship Golf Accolade, Inc. 550 S. Winchester Blvd. Suite 200 San Jose, CA 95128 (408) 985-1700 \$30-\$50	This faithful adaptation requires strategy, good aim, and excellent eye-hand coordination. Options include three courses, tournament play or The Skins Game, and eight computer-controlled playing partners (including the Golden Bear). Even the long delay between screens will not put off golf fans. —Rob Gilpin	512K Apple IIGs, C 64, 384K IBM PC*. CGA, EGA, Hercules. 5.25- and 3.5-inch disks.	N	★	★	★	★	★
Life & Death The Software Toolworks 13557 Ventura Blvd. Sherman Oaks, CA 91423 (818) 907-6789 \$50	Examine, diagnose, treat, and even perform surgery on patients in this interactive medical movie. Excellent graphics and an easy-to-use play system make this an entertaining, if not accurate simulation. However, the documentation is too limited for such a complex subject. —Steve Williams	512K IBM PC*, 512K Mac. CGA, VGA, EGA, or MCGA. 5.25- and 3.5-inch disks.	N	★	★	★	★	★
Visions of Aftermath: The Boomtown Mindscape, Inc. 3444 Dundee Rd. Northbrook, IL 60062 (312) 480-7667 \$40	Without EGA or VGA, this detailed simulation of survival after a nuclear war inevitably induces a headache. An interesting challenge for die-hard survivalists, but the absence of satisfying goals to work toward may leave other gamers cold. —Jeff Donahue	256 IBM PC. CGA, VGA, or EGA. 5.25-inch disks.	Y	★	★	★	★	★
Zany Golf Electronic Arts 1820 Gateway Dr. San Mateo, CA 94404 (800) 245-4525 \$40	The name says it all. You putt through nine holes, around such obstacles as windmills and bouncing hamburgers. Simple controls make the game playable without even glancing at the documentation. There is fun to be had as you shoot for par to advance to the final hole. —Adrian Roston	512K Apple IIGs*, 256K IBM PC. CGA, VGA, EGA, or Hercules. 5.25- and 3.5-inch disks (IBM).	N	★	★	★	★	★

Ratings Key: CP Copy Protected, yes or no; O Overall Performance; D Documentation; EH Error-Handling; PS Play System; GQ Graphics Quality; EU Ease of Use; ★ Poor; ★★ Average; ★★★ Good; ★★★★ Very Good; ★★★★★ Excellent; *Computer Used for Review.

NumberMaze

SYSTEM REQUIREMENTS: 512K Macintosh

PUBLISHER: Great Wave Software, 5353 Scotts Valley Dr., Scotts Valley, CA 95066; (408) 438-1990

PRICE: \$50

PUBLISHER'S SUGGESTED AGES: 5-12

COPY PROTECTED: No

OVERALL PERFORMANCE: ★ ★ ★

DOCUMENTATION: ★ ★ ★

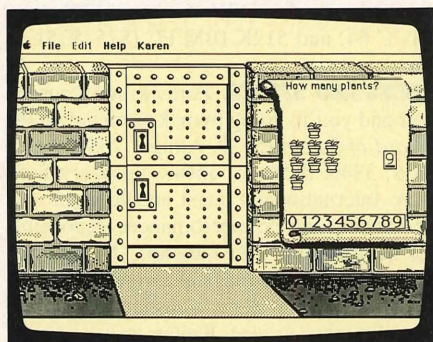
ERROR-HANDLING: ★ ★ ★

GRAPHICS QUALITY: ★ ★ ★ ★

EASE OF USE: ★ ★ ★ ★

NumberMaze for the Macintosh is an exciting way to practice math skills. A castle stands in one corner, a playing piece in the other. Youngsters lead their playing pieces along a path blocked by doors.

At each door, math questions appear magically. Children answer the question by either typing the number, designating the correct number on-screen, or dragging the correct number into place. If they answer correctly, the pieces then continue along the path.



Locked doors must be opened with correct answers to math problems as you wind your way through NumberMaze.

Parents can choose the grade level and relative difficulty of the questions. Problems range from simple counting to more difficult operations like division. If your child masters the highest level, you can design your own questions.

When a child has trouble answering a question, he or she can access the menu to get a hint, see the solution, or ask for a new question.

A progress record is automatically logged onto the disk, and can easily be checked. After each level of math problem is completed, a ready-to-print certificate appears on-screen.

Add variety to the game by choosing from 36 different mazes in the Change Maze option. Add invisible walls and doors that appear only when a piece bumps into them, or disappearing walls and doors that require keys.

The real obstacle in getting into the castle

is mastering math. The maze is a great motivation, and the questions are as challenging as maneuvering the maze of locked doors. Counting problems, word games, and arithmetic are all part of the fun.

—GWEN SOLOMON

ENTERTAINMENT

Zork Zero: The Revenge of Megaboz

SYSTEM REQUIREMENTS: 512K Macintosh, 1MB Macintosh II. Available soon for Apple, Amiga, and IBM.

PUBLISHER: Infocom, Inc., 125 Cambridge Park Dr., Cambridge, MA 02140; (617) 492-6000

PRICE: \$60

COPY PROTECTED: No

OVERALL PERFORMANCE: ★ ★ ★ ★

DOCUMENTATION: ★ ★ ★ ★

PLAY SYSTEM: ★ ★ ★ ★

GRAPHICS QUALITY: ★ ★ ★ ★

EASE OF USE: ★ ★ ★ ★

With *Zork Zero: The Revenge of Megaboz*, Infocom manages to do the same thing to the world of interactive fiction that it did when it released *Zork I*—revolutionize it.

Before the release of *Zork I*, text adventures were primarily slapdash dungeon forays with the sole objective of treasure acquisition. Using two-word parser commands, you would guide a hero through musty caves, engaging in the frustrating routine of "I know what I'm supposed to do, but I can't figure out how to phrase it."

Zork I fulfilled the wishes of many dedicated gamers while setting a new standard for text adventures. It introduced us not only to Grues and a worn brass lantern, but to the full-sentence parser command, mysterious story lines, and random events.

Now that I have *Zork Zero*, a prequel to three previous Zork games (but not to *Beyond Zork*), it's a wonder I was ever content with *Zork I*. Here we see a true full-sentence parser with a huge vocabulary (if it can't



Zork Zero's blend of graphics and prose creates a text adventure of enchanting complexity.

recognize a word, then you've probably misspelled it). *Zork Zero* has a story line that's not only humorous and compelling, but also teaches geography. By visiting such exotic locales as the Granola Mines of Antharia and the lush Fublio Valley, you will discover the secret of the small, white house from *Zork I* and learn just how important Brogmoids are.

And what is a story without characters? From the mighty Megaboz to that wonderfully wacky Jester, you will come in contact with much more than just echoing hallways. Other features that help move the game along are the UNDO command (which lets you be daring and then retract overzealous moves), on-screen hints (there's always something you can't solve), and beautifully rendered automatic mapping (a great time saver).

Finally, there are the puzzles—oodles and oodles of them. More, in fact, than all the puzzles in the game's three predecessors combined, ranging from the blatantly obvious to the maddeningly complex. Author Steve Meretzky outdid himself. There are riddles, logic problems, and even several graphic puzzles like Peggleboz, the Tower of Bozbar, and the dreaded Double Fannucci.

Zork Zero will challenge novice and veteran adventurers alike. This game will engross you for weeks if not months. *Zork Zero* is just what you've been waiting for.

—JEFF DONAHUE

F-19 Stealth Fighter

SYSTEM REQUIREMENTS: 384K IBM PC; CGA, EGA, VGA, or MCGA 5.25- or 3.5-inch disks

PUBLISHER: MicroProse Software, Inc., 180 Lakefront Dr., Hunt Valley, MD 21030; (301) 771-1151

PRICE: \$70

COPY PROTECTED: Yes

OVERALL PERFORMANCE: ★ ★ ★ ★

DOCUMENTATION: ★ ★ ★ ★

PLAY SYSTEM: ★ ★ ★ ★

GRAPHICS QUALITY: ★ ★ ★

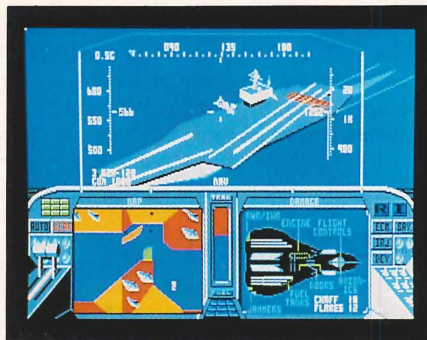
EASE OF USE: ★ ★ ★ ★

Over the past few years, the computer gaming industry has been deluged with a continuous stream of flight-simulator games. Junkies like me are ready and willing to shell out our hard-earned cash to buy any new product that comes out on the market. All we ask is that each new game look better, play better, and include more gadgets. *F-19 Stealth Fighter* more than fulfills these demands.

The Stealth Fighter is a radar-elusive jet designed to perform reconnaissance and attack missions without being detected. *F-19* takes advantage of real stealth technology to provide you with new challenges. For example, the game manual includes a chapter on using the plane's special abilities to sneak up on the enemy.

The best features of these simulations are the realistic combat scenarios. Players can choose to fly missions in four potential hot spots: Libya, the Persian Gulf, Scandinavia's North Cape, and Central Europe. *F-19* provides maps and intelligence information for each of these areas to add to the realism. Also, players can set the level of conflict in each mission, choosing from covert spy missions in a cold war to full-blown combat strikes in World War III.

F-19 is packed with extra features. Inside the cockpit are a realistic multimode Heads-Up Display (HUD) and two multifunction information screens. The game uses the large-



Recognizable scenery combined with maps and intelligence information for each area adds to the realistic sensation of flying an F-19 Stealth Fighter.

est arsenal of weapons I've seen in a combat simulator. And a keyboard overlay makes the more than 50 plane controls easy to use. There are also variable levels of difficulty.

The graphics in *F-19* are outstanding, even on CGA. When flying at low altitudes, you can see oil wells by the Persian Gulf and windmills in Central Europe. There are 11 different views to choose from, including the tactical view, which shows both the F-19 and its target on the same screen.

So, fellow flight-simulator junkies, take heart. With its new challenges, fancy gadgets, and great graphics, *F-19 Stealth Fighter* is a winner. —STEVE WILLIAMS

Entertainment News and Hints

The Latest Scoop on Games

BY JIM PHELAN



UNIQUE ADVENTURES. In addition to producing sequels to their megahits (*King's Quest*, *Police Quest*, *Space Quest*, and *Leisure Suit Larry*), each year, Sierra On-Line publishes a number of

original graphic adventures. Two new Sierra programs are scheduled for release this summer. *Murder in the Southern Quarter* (IBM PC; \$50) is still in the early production stages. Written by Roberta Williams and Jackie Austin, the mystery takes place in New Orleans at Mardi Gras time. *Legends in Folklore* (IBM PC; \$50) introduces Paul Bunyan and several other popular American folk heroes. Don't let the knowledge that you're learning as you play spoil your fun. It's refreshing to see companies like Sierra take chances on new titles instead of merely resting on the laurels of their proven successes.

WIDE WORLD OF SPORTS. Regardless of the weather conditions outside your window, *Downhill Challenge* (256K Amiga, 512K Apple IIGS, 512K Atari ST, C 64, 256K IBM PC; \$20-\$35) lets you and five other players compete in four skiing events—downhill, slalom, giant slalom, and my personal favorite, ski jumping. Three different skill levels will prevent you from getting in over your head. If that isn't enough excitement for you, then try Accolade's *TKO* (C 64, 256K IBM PC; \$30-\$40). Instead of watching your fighter from a distance, you get a first-person perspective on what it's like to be in the ring. Go three, five, or ten rounds

against a friend or computer-controlled fighter in this game. You can even watch bruises appear on your opponent's face with each punch delivered.

IMPORTED GOODS. DataSoft has released four strategy games originally published in Great Britain. One, *The Annals of Rome*, begins in 273 B.C. when Rome became a sovereign state. If you make wise decisions as Emperor, you can rewrite history and keep the peace well beyond A.D. 410. Battles between the four warring powers of Earth during the twenty-second century take place in *Firezone*. You use beam weapons and energy shields in the nine preset campaigns or scenarios you create yourself. *The Android Decision* is also set in the future, where two robot cities vie for world dominance. In *Sorcerer Lord*, you must combine fantasy role-playing tactics with war-game strategies to help mortals defend their land from the Shadowlord. Each of the above games is

available for the 512K Amiga, 512K Atari ST, C 64, and 512K IBM PC (\$25-\$35).

STICKS AND STONES. Zoras killed your father and you're going to make him pay in the *Sword of Sodan* (512K Amiga, 768K Apple IIGS, 384K IBM PC; \$50). Discovery Software International's latest arcade game pits you against the evil necromancer responsible for the plight of your kingdom. Using brute strength and your magical sword, you must fight your way to Zoras's castle where you'll meet him face to face. Knives, rocks, whips, and baseball bats are the weapons of choice in the computer version of Arcadia's arcade hit *Double Dragon* (512K Amiga, 512K Atari ST, C 64, 512K IBM PC; \$35-\$40). Rescue your girlfriend, who's been kidnapped by a street gang, on your own or with a friend fighting by your side. Of course, hand-to-hand combat is always an option in this martial arts arcade game.

BORN TO EXPLORE. Genghis Khan wasn't the only ruler who tried to conquer all of Mongolia. He shared this goal with Emperor Alexious III, Richard the Lion-Hearted, and Shogun Minamoto. Now it's your turn to try empire building in Koei Corporation's historic *Genghis Khan* (384K IBM PC; \$60). One to four players battle it out using military, economic, and diplomatic weapons in hopes of becoming the world's most powerful ruler. If you prefer lands of make-believe, you may want to explore Cron in the long-awaited *Might and Magic II* (128K Apple, C 64, 256K IBM PC w/CGA, 384K IBM PC w/EGA; \$50). 255 animated monsters and automapping are just a couple of the addi-



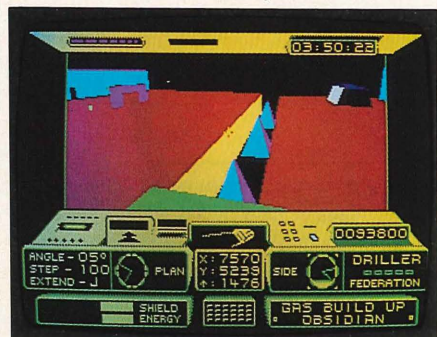
Your decisions as Emperor determine *The Annals of Rome* between the year 273 B.C. and A.D. 410.



Join the ranks of the world's most infamous conquerors in Genghis Khan.

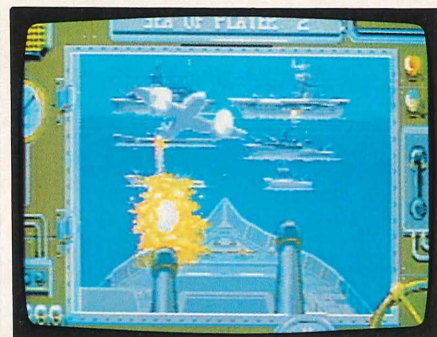
tions New World Computing, Inc. made to its popular 3-D fantasy role-playing game. You may want to pick up the \$13 clue book when it's available this spring.

EPYX EXCITEMENT. It's up to you to save mankind in Epyx's futuristic 3-D game of beat the clock. Volatile pockets of gas have formed beneath a mining planet's surface and all life forms will be destroyed if 18 holes are



Race the clock to save Space Station Oblivion before it's obliterated.

not drilled into *Space Station Oblivion* (\$40-\$50) in time to release the pressure. The game sounds more like a golf course construction set than a science-fiction adventure. The familiar cry "You sunk my Battleship!" will ring out again, now that Milton Bradley's classic board game has made its way to personal computers. Epyx's version of *Bat-*



Computer technology adds spice to Milton Bradley's classic Battleship.

tleship (\$30) has been spruced up with graphics, sound effects, and tournament or solo modes. Both games are available for the 512K Amiga, 512K Atari ST, C 64, and 256K IBM PC.

GAME HINTS

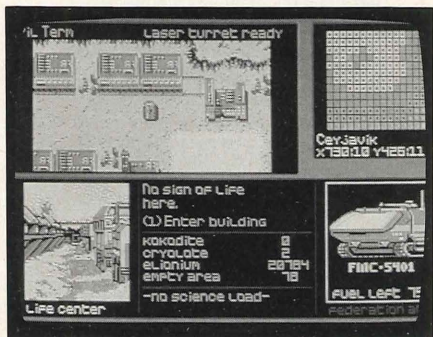
The Ancient Art of War at Sea (Broderbund). Lead a battle against some of the greatest naval leaders of all time. Choose from 11 classic campaigns or create your own.



- ★ Group your ships in squadrons of two or three.
- ★ Your cannons usually have greater range than your opponent's.
- ★ Aim for the sails of enemy ships.
- ★ Ram the other ship when you have flag or line fighting in close quarters with a frigate.
- ★ Cause ports to need supplies often so that you can cut off supplies to enemy ports more easily and intercept merchant ships.
- ★ Keep one flagship away from the enemy, preferably near a port.

—LAZAROS VOLIKAS
Richboro, Pennsylvania

Sentinel Worlds I: Future Magic (Electronic Arts). Travel to a distant star system and thwart the raiders who are attacking shipping convoys in this graphic-intensive adventure game.

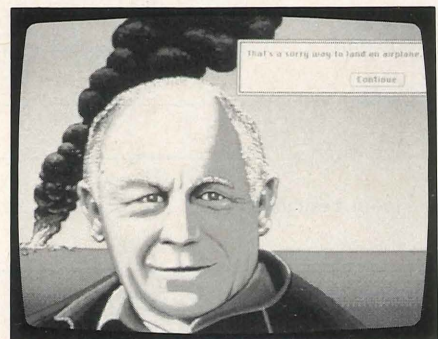


- ★ Give all characters 20 comprehension points.
- ★ At the beginning of the game, board the space yacht near Norjaenn.

- ★ Visit the spas as often as possible.
- ★ There is an armory in each of the bars at the bottom of the towers.
- ★ Improve reconnaissance skills until you have a total of 16 in the party, and increase each person's tactical skills to seven.
- ★ The armory is in the northeast corner of raider ships.
- ★ If you find minerals on Caldorre, sell them on Norjaenn, and vice versa.
- ★ There is a discount weapons shop on Ceyjavik at (2112,480).

—PHILIP SCHNELL
Norman, Oklahoma

Chuck Yeager's Advanced Flight Trainer (Electronic Arts). Choose from 14 different planes including a WWI Spad and the top secret SR-71. Chuck will give you basic flight instructions or teach you how to perform difficult aerial maneuvers.



- ★ Come close to or touch Chuck's smoke to score points while in formation.
- ★ Remember that the Spad and F-18 reach takeoff speed much faster than the P-51 Mustang.
- ★ During a maneuver, you are invulnerable to planes racing against or flying with you.
- ★ Study Chuck's flight plan.
- ★ Don't go full speed when in formation.
- ★ The F-18 is not as maneuverable as the other racing planes.

—JACK LANGSDORF
Wellesley, Massachusetts

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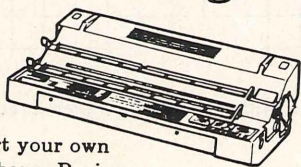
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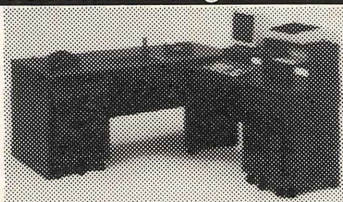
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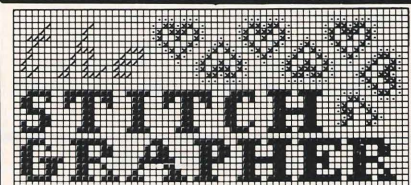
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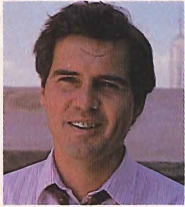
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CIRCLE READER SERVICE 18

Organization Man, Late 1980's Style

BY NICK SULLIVAN



Over the years I've made several efforts to computerize the records, notes, ideas, and names that form the basis of my work. And with each new electronic filing system, I've also set up a new paper-tracking system, since the two must work hand in hand. But each time, I've found that I can't transfer my own sense of organization to the machine, or that the machine and paper systems are not in sync. Imagine a library where the card catalog doesn't point you to the books in the stacks. I usually conclude that I'm better off with a good night's sleep and a first-rate appointment book.

But I can't count the number of good ideas that have evaporated because I had no place set aside to file them. Or the good contacts that were lost when I put a business card in a Rolodex—because once I filed the name, there was no hook to bring me back to it. Since I lack a librarian's instinct for retrieval, my filing cabinets tend to resemble dead-letter boxes.

What with home-office catalogs and mail, computer printouts, and 10-foot fax documents, there's more paper coming into my office every day. In addition to a new electronic filing system, I need a trash compactor.

My latest reorganization started last fall when I went to Comdex, the big computer trade show in Las Vegas. A lot of publishers were selling personal information managers, the new software affectionately known as PIMs. I asked publishers how their products were selling and the invariable response was: "Good. But it would be better if people knew what a PIM was. We have to explain the concept before we market the product."

Being a trained journalist, I asked, "What is a PIM?" Answer: "It's kind of hard to explain. We'll have to show you." *This is beautiful*, I thought: *They can't sell it unless they can explain it, and they can't explain it. I also thought: I can't explain my systems either, so this PIM just might work for me.*

NICK SULLIVAN is a senior editor of HOME-OFFICE COMPUTING who lives and works in Massachusetts and telecommutes to the New York office.

In fact, that seems to be the case. I've been tossing all kinds of stray information into Lotus *Agenda*, one of the new PIMs, and then looking at it from several viewpoints. The previously unfiled ideas now float freely in the computer—or are anchored to names, dates, or content areas. The strange names that were rotting in my Rolodex now have new lives—they are attached to bios, notes, queries, and correspondence. And, using a more traditional database format, I track all pertinent information for upcoming articles.

**The strange names
that were rotting in
my Rolodex now
have new lives—they
are attached to bios,
notes, queries, and
correspondence.**

I used to keep much of this information in my head, with mixed results.

One aspect of *Agenda* I particularly like is that I don't have to create fields, as is necessary with a traditional database. I can just type in descriptions of people, story ideas, or resource listings—and combine all the loose ends in one file that I've called Notes. Thus, I don't even have to think about where to file odd bits—they all go into the same bin. Then, when I need, say, a consultant for a tax story, I can search the file by Tax, Consultant, Expert, Money, Research, IRS, or whatever, and I'm sure to find the person I need.

There's nothing particularly magical about my system—except that it works for me and that I was able to set it up in about a day. I never could do that with a database because the software forced me to pigeonhole people and ideas, when I prefer a more free-form filing system.

The problem with change is that it sets off

a chain reaction of its own. You have to start changing everything, it seems.

Agenda, or any such program (others include *askSam*, *GrandView*, and *Info XL*), will only work over the long term if used regularly. With my current computer, a Leading Edge Model D, I have to exit my word processor and load *Agenda* even if I just want to jot a quick note.

So I gave Microsoft *Windows* a brief try-out, since it allows you to open two programs and switch between them; but *Agenda* requires 512K, *XyWrite III* (my word-processing program) requires 256K, and I also have Borland's *SideKick*, another 65K, installed. Add *Windows* at 100K to those, and you end up with well over 640K, which is all I've got. In short, without a memory-packed 386 machine, I can't keep *Agenda* open all day.

The Lotus *Metro* memory-resident desk accessory included with *Agenda* can be used to enter notes from within your word processor. Just pop up *Metro*, jot down the note, go back to your word processor, and enter the note in *Agenda* later. But *Metro* won't run on my computer because I have an ancient ROM BIOS chip that I need to replace.

The second (or is it the 25th?) problem is that my computer's battery is dead so the time/date clock doesn't work. Every time I turn on the computer, I find it's January 1, 1980. Instead of peering into the 1990s, I'm back at the start of the Reagan era with an ancient ROM chip.

Being lost in time didn't bother me until I used *Agenda*, which has a fabulous automatic date-stamping function. I bought a new battery to get the problem straightened out, but I couldn't even find the dead battery. As I had feared, the battery is located under the hard-disk drive. I wouldn't touch that with a 10-foot pole.

Nonetheless, I'm quite excited about the improvements to date, and am determined to smooth out the kinks. Because I use *Agenda* several times a day, it has effectively turned my computer into an intelligent trash compactor. In the past, I'd periodically clean out the junk from my filing cabinets—it would often be the first time I had looked at the stuff since filing it. Now, I'm in my electronic filing cabinet every day, seeking lost or overlooked treasures. ■

For a review of Lotus *Agenda*, see page 30.

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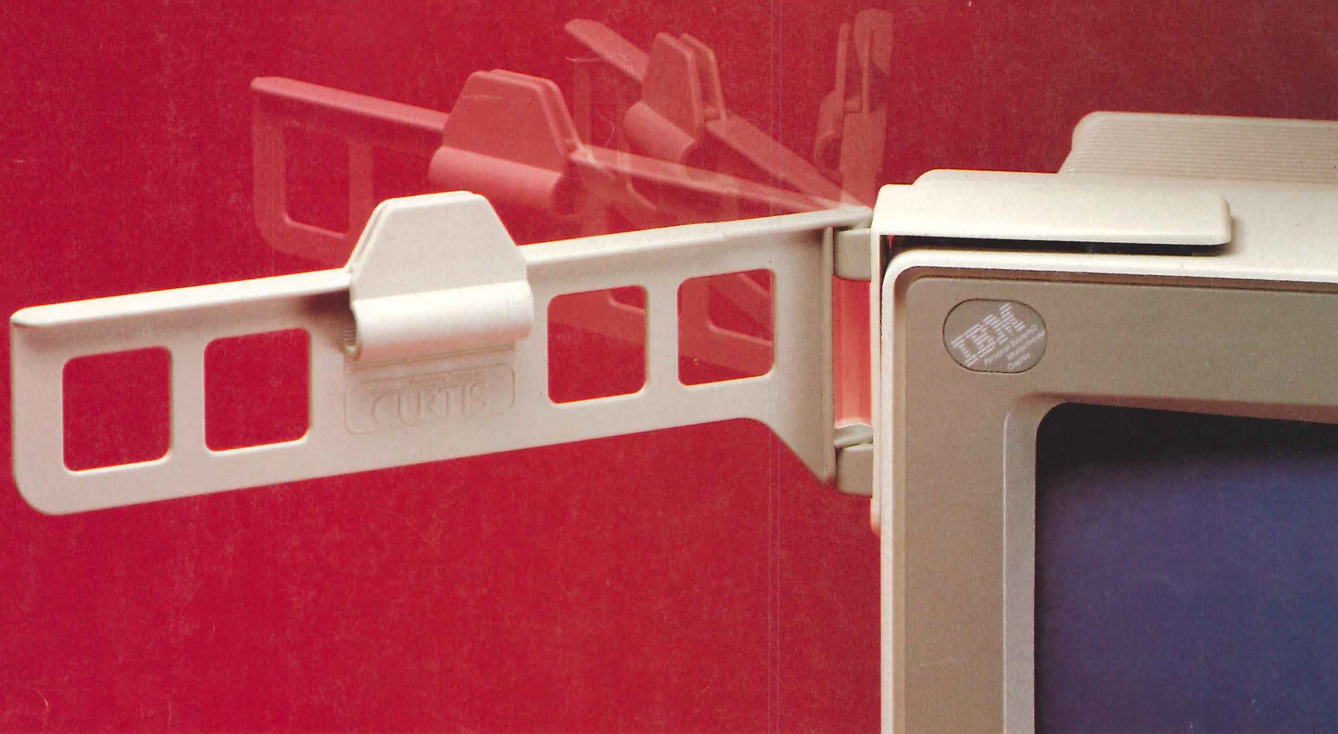
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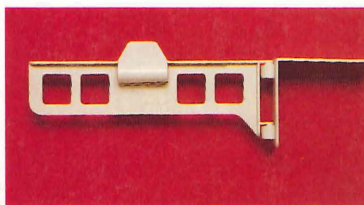
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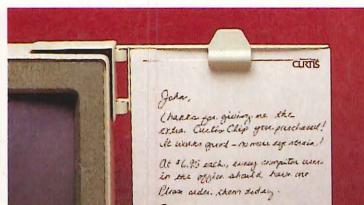
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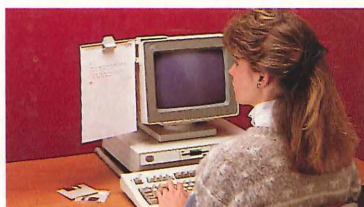
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